

Issue Date: [June 2010](#)

# **Alcohol-use disorders: preventing the development of hazardous and harmful drinking**

**NICE public health guidance 24**  
**Alcohol-use disorders: preventing the development of hazardous and harmful drinking**

**Ordering information**

You can download the following documents from [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

- The NICE guidance (this document) which includes all the recommendations, details of how they were developed and evidence statements.
- A quick reference guide for professionals and the public.
- Supporting documents, including an evidence review and an economic analysis.

For printed copies of the quick reference guide, phone NICE publications on 0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) and quote N2117.

This guidance represents the views of the Institute and was arrived at after careful consideration of the evidence available. Those working in the NHS, local authorities, the wider public, voluntary and community sectors and the private sector should take it into account when carrying out their professional, managerial or voluntary duties.

Implementation of this guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in this guidance should be interpreted in a way which would be inconsistent with compliance with those duties.

**National Institute for Health and Clinical Excellence**

MidCity Place  
71 High Holborn  
London  
WC1V 6NA

[www.nice.org.uk](http://www.nice.org.uk)

## Introduction

The Department of Health asked the National Institute for Health and Clinical Excellence (NICE) to produce public health guidance on the prevention and early identification of [alcohol-use disorders](#) among adults and adolescents.

The guidance is for government, industry and commerce, the NHS and all those whose actions affect the population's attitude to – and use of – alcohol. This includes commissioners, managers and practitioners working in local authorities, education and the wider public, private, voluntary and community sectors. In addition, it may be of interest to members of the public.

This is one of three pieces of NICE guidance addressing alcohol-related problems among people aged 10 years and older. The others are:

- 'Alcohol-use disorders: diagnosis and clinical management of alcohol-related physical complications' (NICE clinical guideline 100 [2010]). A clinical guideline covering acute alcohol withdrawal including delirium tremens, alcohol-related liver damage, alcohol-related pancreatitis and management of Wernicke's encephalopathy.
- 'Alcohol-use disorders: diagnosis, assessment and management of harmful drinking and alcohol dependence' (publication expected February 2011). A clinical guideline covering identification, assessment, pharmacological and psychological/psychosocial interventions, and the prevention and management of neuropsychiatric complications.

The guidance complements, but does not replace, NICE guidance on school-based interventions on alcohol. It will also complement NICE guidance on: personal, social and health education; prevention of cardiovascular disease; antenatal care; and associated guidance on alcohol-use disorders (management and dependence) (for further details, see section 7).

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The Programme Development Group (PDG) developed these recommendations on the basis of reviews of the evidence, an economic analysis, expert advice, stakeholder comments and fieldwork.

Members of the PDG are listed in appendix A. The methods used to develop the guidance are summarised in appendix B. Supporting documents used to prepare this document are listed in appendix E.

Full details of the evidence collated, including fieldwork data and activities and stakeholder comments, are available on the NICE website, along with a list of the stakeholders involved and NICE's supporting process and methods manuals. The website address is: [www.nice.org.uk](http://www.nice.org.uk)

This guidance was developed using the NICE public health programme process.

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## 1 Recommendations

This is NICE's formal guidance on the prevention and early identification of alcohol-use disorders among adults and adolescents. When writing the recommendations, the Programme Development Group (PDG) (see appendix A) considered the evidence of effectiveness (including cost effectiveness), fieldwork data and comments from stakeholders and experts. Full details are available at [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

The evidence statements underpinning the recommendations are listed in appendix C.

The evidence reviews, supporting evidence statements and economic analysis are available at [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

### ***Population versus individual approach***

A combination of interventions are needed to reduce [alcohol-related harm](#) – to the benefit of society as a whole.

Population-level approaches are important because they can help reduce the aggregate level of alcohol consumed and therefore lower the whole population's risk of alcohol-related harm. They can help:

- those who are not in regular contact with the relevant services
- those who have been specifically advised to reduce their alcohol intake, by creating an environment that supports [lower-risk](#) drinking.

They can also help prevent people from drinking harmful or hazardous amounts in the first place.

Interventions aimed at individuals can help make people aware of the potential risks they are taking (or harm they may be doing) at an early stage. This is important, as they are most likely to change their behaviour if it is

tackled early. In addition, an early intervention could prevent extensive damage.

The government continues to use both individual and population approaches to address the harm caused by alcohol (for example, in its strategy 'Safe. Sensible. Social.'<sup>1</sup>).

This NICE guidance provides authoritative recommendations, based on a robust analysis of the evidence, which support current government activities. The recommendations could form part of a national framework for action.

As highlighted by the House of Commons Public Accounts Committee<sup>2</sup>, national-level action to reduce the population's alcohol consumption requires coordinated government policy. It also needs government, industry and key non-governmental organisations to work together.

### ***Policy and practice***

This guidance makes the case that alcohol-related harm is a major public health problem. On the basis of the best available evidence, it also identifies the policy options that are most likely to be successful in combating such harm. The final decision on whether these policies are adopted – and how they are prioritised – will be determined by government and the normal political processes.

The policy recommendations (recommendations 1 to 3) are based on extensive and consistent evidence which suggests that the issues identified deserve close attention. This evidence also suggests that policy change is likely to be a more effective – and more cost-effective – way of reducing alcohol-related harm among the population than actions undertaken by local health professionals. Many of the policy changes considered in this guidance

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<sup>1</sup> Department of Health (2007) Safe. Sensible. Social. The next steps in the national alcohol strategy. London: Department of Health.

<sup>2</sup> House of Commons Public Accounts Committee (2009) Reducing alcohol harm: health services in England for alcohol misuse. London: The Stationery Office.

are similar to those proposed by the House of Commons Health Select Committee<sup>3</sup>.

The recommendations for practice (recommendations 4 to 12) support, complement – and are reinforced by – these policy options. They include the use of [screening](#) and [brief interventions](#). The latter includes [structured brief advice](#) and [extended brief interventions](#).

For the purposes of this guidance, screening involves identifying people who are not seeking treatment for alcohol problems but who, in the view of the professional, may have an alcohol-use disorder. Practitioners may use any contact with clients to carry out this type of screening. The term is not used here to refer to national screening programmes such as those recommended by the UK National Screening Committee (UK NSC).

## ***Recommendations for policy***

### ***Who should take action?***

The Chief Medical Officer should coordinate the alcohol harm-reduction strategy for England across government, supported by the Department of Health.

The following departments and national agencies should also be involved:

- Advertising Standards Authority
- Department for Business, Innovation and Skills
- Department for Children, Schools and Families
- Department for Culture, Media and Sport
- Department for Environment, Food and Rural Affairs
- Department of Communities and Local Government
- HM Treasury
- Home Office

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<sup>3</sup> House of Commons Health Select Committee (2010) Alcohol first report of session 2009–10. London: The Stationery Office.



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- Ministry of Justice
- National Treatment Agency
- Ofcom
- Office of Fair Trading.

Organisations that should be consulted include:

- advertisers
- alcohol producers
- national non-governmental organisations (for example, Alcohol Concern and the Royal Medical Colleges)
- off- and on-sale retailers.

### **Recommendation 1: price**

Making alcohol less affordable is the most effective way of reducing alcohol-related harm. The current excise duty varies for different alcoholic products (for historical reasons and under EU legislation). This means that the duty does not always relate directly to the amount of alcohol in the product. In addition, an increase in the duty levied does not necessarily translate into a price increase as retailers or producers may absorb the cost. There is extensive international and national evidence (within the published literature and from economic analyses) to justify reviewing policies on pricing to reduce the affordability of alcohol.

### ***What action could be taken?***

- Consider introducing a minimum price per [unit](#). Set the level by taking into account the health and social costs of alcohol-related harm and its impact on alcohol consumption. Consider initiating a review of the excise duty regime with fellow EU member states. The aim would be to obtain a pan-EU agreement on harmonisation which links alcohol duty to the strength of each product.
- Regularly review the minimum price per unit to ensure alcohol does not become more affordable over time.

- Regularly review alcohol duties to make sure alcohol does not become more affordable over time.

### **Recommendation 2: availability**

International evidence suggests that making it less easy to buy alcohol, by reducing the number of outlets selling it in a given area and the days and hours when it can be sold, is another effective way of reducing alcohol-related harm. In Scotland, protection of the public's health is part of the licensing objectives.

#### ***What action could be taken?***

- Consider revising legislation on licensing to ensure:
  - protection of the public's health is one of its objectives
  - health bodies are [responsible authorities](#)
  - licensing departments can take into account the links between the availability of alcohol and alcohol-related harm when considering a licence application (that is, they can take into account the number of alcohol outlets in a given area and times when it is on sale and the potential links to local crime and disorder and alcohol-related illnesses and deaths)
  - immediate sanctions can be imposed on any premises in breach of their licence, following review proceedings.
- Consider reducing personal import allowances to support the introduction of a minimum price per unit of alcohol.

### **Recommendation 3: marketing**

There is evidence that alcohol advertising does affect children and young people. It shows that exposure to alcohol advertising is associated with the onset of drinking among young people and increased consumption among those who already drink. All of the evidence suggests that children and young people should be protected as much as is possible by strengthening the current regulations.

***What action could be taken?***

- Ensure children and young people's exposure to alcohol advertising is as low as possible by considering a review of the current advertising codes. This review would ensure:
  - the limits set by the Advertising Standards Authority (ASA) for the proportion of the audience under age 18 are appropriate
  - where alcohol advertising is permitted there is adequate protection for children and young people
  - all alcohol marketing, particularly when it involves new media (for example, web-based channels and mobile phones) and product placement, is covered by a stringent regulatory system which includes ongoing monitoring of practice.
- Ofcom, the ASA and the government should keep the current regulatory structure under review.
- Assess the potential costs and benefits of a complete alcohol advertising ban to protect children and young people from exposure to alcohol marketing.

***Recommendations for practice***

**Recommendation 4: licensing**

***Who is the target population?***

Alcohol licence-holders and designated supervisors of licensed premises.

***Who should take action?***

- Local authorities.
- Trading standards officers.
- The police.
- Magistrates.

- Revenue and customs.

***What action should they take?***

- Use local crime and related trauma data to map the extent of alcohol-related problems before developing or reviewing a licensing policy. If an area is '[saturated](#)' with licensed premises and the evidence suggests that additional premises may affect the licensing objectives, adopt a 'cumulative impact' policy. If necessary, limit the number of new licensed premises in a given area.
- Ensure sufficient resources are available to prevent under-age sales, sales to people who are intoxicated, proxy sales (that is, illegal purchases for someone who is under-age or intoxicated), non-compliance with any other alcohol licence condition and illegal imports of alcohol.
- Work in partnership with the appropriate authorities to identify and take action against premises that regularly sell alcohol to people who are under-age, intoxicated or making illegal purchases for others.
- Undertake test purchases (using 'mystery' shoppers) to ensure compliance with the law on under-age sales. Test purchases should also be used to identify and take action against premises where sales are made to people who are intoxicated or to those illegally purchasing alcohol for others.
- Ensure sanctions are fully applied to businesses that break the law on under-age sales, sales to those who are intoxicated and proxy purchases. This includes fixed penalty and closure notices (the latter should be applied to establishments that persistently sell alcohol to children and young people).

**Recommendation 5: resources for screening and brief interventions**

***Who is the target population?***

Professionals who have contact with those aged 16 and over.

***Who should take action?***

- Chief executives of NHS and local authorities.
- Commissioners of NHS healthcare services.
- Commissioners from multi-agency joint [commissioning](#) groups.
- Managers of NHS-commissioned services.

***What action should they take?***

- Chief executives of NHS and local authorities should prioritise alcohol-use disorder prevention as an 'invest to save' measure.
- Commissioners should ensure a local joint alcohol needs assessment is carried out in accordance with 'World class commissioning'<sup>4</sup> and 'Signs for improvement'<sup>5</sup>. They should also ensure locally defined integrated care pathways for alcohol [treatment](#) are reviewed.
- Commissioners should ensure their plans include screening and brief interventions for people at risk of an alcohol-related problem (hazardous drinkers) and those whose health is being damaged by alcohol (harmful drinkers). This includes people from disadvantaged groups.
- Commissioners should make provision for the likely increase in the number of referrals to services providing tier two, three and four structured alcohol treatments as a result of screening. These services should be properly resourced to support the stepped care approach recommended in 'Models of care for alcohol misusers'<sup>6</sup>.

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<sup>4</sup> DH World class commissioning [online]. Available from [www.dh.gov.uk/en/Managingyourorganisation/Commissioning/Worldclasscommissioning/](http://www.dh.gov.uk/en/Managingyourorganisation/Commissioning/Worldclasscommissioning/)

<sup>5</sup> DH (2009) Signs for improvement: commissioning interventions to reduce alcohol-related harm [online]. Available from [www.dh.gov.uk/en/Publicationsandstatistics/Publications/DH\\_102813](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/DH_102813)

<sup>6</sup> Department of Health (2006) Models of care for alcohol misusers (MOCAM). London: Department of Health.

- Commissioners should ensure at least one in seven dependent drinkers can get treatment locally, in line with ‘Signs for improvement’<sup>7</sup>.
- Commissioners should include formal evaluation within the commissioning framework so that alcohol interventions and treatment are routinely evaluated and followed up. The aim is to ensure adherence to evidence-based practice and to ensure interventions are cost effective.
- Managers of NHS-commissioned services must ensure an appropriately trained nurse or medical consultant, with dedicated time, is available to provide strategic direction, governance structures and clinical supervision to alcohol specialist nurses and care givers.
- Managers of NHS-commissioned services must ensure community and voluntary sector providers have an appropriately trained professional who can provide strategic direction, governance structures and supervision to those providing screening and brief interventions.
- Managers of NHS-commissioned services must ensure staff have enough time and resources to carry out screening and brief intervention work effectively. Staff should have access to recognised, evidence-based packs. These should include: a short guide on how to deliver a brief intervention, a validated screening questionnaire, a visual presentation (to compare the person’s drinking levels with the average), practical advice on how to reduce alcohol consumption, a self-help leaflet and possibly a poster for display in waiting rooms.
- Managers of NHS-commissioned services must ensure staff are trained to provide alcohol screening and structured brief advice. If there is local demand, staff should also be trained to deliver [extended brief interventions](#).

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<sup>7</sup> Department of Health (2009) Signs for improvement – commissioning interventions to reduce alcohol-related harm. London: Department of Health.

## **Recommendation 6: supporting children and young people aged 10 to 15 years**

### ***Who is the target population?***

Children and young people aged 10 to 15 years who are thought to be at risk from their use of alcohol.

### ***Who should take action?***

Any professional with a safeguarding responsibility for children and young people and who regularly comes into contact with this age group.

### ***What action should they take?***

- Use professional judgement to routinely assess the ability of these children and young people to consent to alcohol-related interventions and treatment. Some will require parental or carer involvement.
- Obtain a detailed history of their alcohol use (for example, using the Common Assessment Framework as a guide). Include background factors such as family problems and instances of child abuse or under-achievement at school.
- Use professional judgement to decide on the appropriate course of action. In some cases, it may be sufficient to empathise and give an opinion about the significance of their drinking and other related issues that may arise. In other cases, more intensive counselling and support may be needed.
- If there is a reason to believe that there is a significant risk of alcohol-related harm, consider referral to child and adolescent mental health services, social care or to young people's alcohol services for treatment, as appropriate and available.
- Ensure discussions are sensitive to the child or young person's age and their ability to understand what is involved, their emotional maturity, culture, faith and beliefs. The discussions (and tools used) should also take into

account their particular needs (health and social) and be appropriate to the setting.

### **Recommendation 7: screening young people aged 16 and 17 years**

#### ***Who is the target population?***

Young people aged 16 and 17 years who are thought to be at risk from their use of alcohol.

#### ***Who should take action?***

Health and social care, criminal justice and community and voluntary professionals in both NHS and non-NHS settings who regularly come into contact with this group.

#### ***What action should they take?***

- Complete a validated alcohol screening questionnaire with these young people. Alternatively, if they are judged to be competent enough, ask them to fill one in themselves. In most cases, [AUDIT](#)<sup>8</sup> (alcohol use disorders identification test) should be used. If time is limited, use an abbreviated version (such as AUDIT-C, AUDIT-PC, CRAFFT, SASQ or FAST). Screening tools should be appropriate to the setting. For instance, in an emergency department, FAST or the Paddington Alcohol Test (PAT) would be most appropriate.
- Focus on key groups that may be at an increased risk of alcohol-related harm. This includes those:
  - who have had an accident or a minor injury
  - who regularly attend genito-urinary medicine (GUM) clinics or repeatedly seek emergency contraception
  - involved in crime or other antisocial behaviour
  - who truant on a regular basis
  - at risk of self-harm

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<sup>8</sup> Babor TF, Higgins-Biddle JC, Saunders JB (2001) The alcohol use disorders identification test – guidelines for use in primary care. Geneva: World Health Organization.



- who are looked after
  - involved with child safeguarding agencies.
- When broaching the subject of alcohol and screening, ensure discussions are sensitive to the young person's age and their ability to understand what is involved, their emotional maturity, culture, faith and beliefs. The discussions should also take into account their particular needs (health and social) and be appropriate to the setting.
- Routinely assess the young person's ability to consent to alcohol-related interventions and treatment. If there is doubt, encourage them to consider involving their parents in any alcohol counselling they receive.

**Recommendation 8: extended brief interventions with young people aged 16 and 17 years**

***Who is the target population?***

Young people aged 16 and 17 years who have been identified via screening as drinking hazardously or harmfully.

***Who should take action?***

Health and social care, criminal justice and community and voluntary sector professionals in both NHS and non-NHS settings who regularly come into contact with this group.

***What action should they take?***

- Ask the young person's permission to arrange an extended brief intervention for them.
- Appropriately trained staff should offer the young person an extended brief intervention.
- Provide information on local specialist addiction services to those who do not respond well to discussion but who want further help. Refer them to

these services if this is what they want. Referral must be made to services that deal with young people.

- Give those who are actively seeking treatment for an alcohol problem a physical and mental assessment and offer, or refer them for, appropriate treatment and care.

### **Recommendation 9: screening adults**

#### ***Who is the target population?***

Adults.

#### ***Who should take action?***

Health and social care, criminal justice and community and voluntary sector professionals in both NHS and non-NHS settings who regularly come into contact with people who may be at risk of harm from the amount of alcohol they drink.

#### ***What action should they take?***

- NHS professionals should routinely carry out alcohol screening as an integral part of practice. For instance, discussions should take place during new patient registrations, when screening for other conditions and when managing chronic disease or carrying out a medicine review. These discussions should also take place when promoting sexual health, when seeing someone for an antenatal appointment and when treating minor injuries.
- Where screening everyone is not feasible or practicable, NHS professionals should focus on groups that may be at an increased risk of harm from alcohol and those with an alcohol-related condition. This includes people:
  - with relevant physical conditions (such as hypertension and gastrointestinal or liver disorders)

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- with relevant mental health problems (such as anxiety, depression or other mood disorders)
  - who have been assaulted
  - at risk of self-harm
  - who regularly experience accidents or minor traumas
  - who regularly attend GUM clinics or repeatedly seek emergency contraception.
- Non-NHS professionals should focus on groups that may be at an increased risk of harm from alcohol and people who have alcohol-related problems. For example, this could include those:
  - at risk of self-harm
  - involved in crime or other antisocial behaviour
  - who have been assaulted
  - at risk of domestic abuse
  - whose children are involved with child safeguarding agencies
  - with drug problems.
- When broaching the subject of alcohol and screening, ensure the discussions are sensitive to people's culture and faith and tailored to their needs.
- Complete a validated alcohol questionnaire with the adults being screened. Alternatively, if they are competent enough, ask them to fill one in themselves. Use AUDIT to decide whether to offer them a brief intervention (and, if so, what type) or whether to make a referral. If time is limited, use an abbreviated version (such as AUDIT-C, AUDIT-PC, SASQ or FAST). Screening tools should be appropriate to the setting. For instance, in an emergency department FAST or PAT would be most appropriate.
- Do not offer simple brief advice to anyone who may be dependent on alcohol. Instead, refer them for specialist treatment (see recommendation

12). If someone is reluctant to accept a referral, offer an extended brief intervention (see recommendation 11).

- Use professional judgement as to whether to revise the AUDIT scores downwards when screening:
  - women, including those who are, or are planning to become, pregnant
  - younger people (under the age of 18)
  - people aged 65 and over
  - people from some black and minority ethnic groups.

If in doubt, consult relevant specialists. Work on the basis that offering an intervention is less likely to cause harm than failing to act where there are concerns.

- Consult relevant specialists when it is not appropriate to use an English language-based screening questionnaire. (For example, when dealing with people whose first language is not English or who have a learning disability.)
- Biochemical measures should not be used as a matter of routine to screen someone to see if they are drinking hazardously or harmfully. (This includes measures of blood alcohol concentration [BAC].) Biochemical measures may be used to assess the severity and progress of an established alcohol-related problem, or as part of a hospital assessment (including assessments carried out in emergency departments).

### **Recommendation 10: brief advice for adults**

#### ***Who is the target population?***

Adults who have been identified via screening as drinking a hazardous or harmful amount of alcohol and who are attending NHS or NHS-commissioned services or services offered by other public institutions.

***Who should take action?***

Professionals who have received the necessary training and work in:

- primary healthcare
- emergency departments
- other healthcare services (hospital wards, outpatient departments, occupational health, sexual health, needle and syringe exchange programmes, pharmacies, dental surgeries, antenatal clinics and those commissioned from the voluntary, community and private sector)
- the criminal justice system
- social services
- higher education
- other public services.

***What action should they take?***

- Offer a session of structured brief advice on alcohol. If this cannot be offered immediately, offer an appointment as soon as possible thereafter.
- Use a recognised, evidence-based resource that is based on [FRAMES](#) principles (feedback, responsibility, advice, menu, empathy, self-efficacy). It should take 5–15 minutes and should:
  - cover the potential harm caused by their level of drinking and reasons for changing the behaviour, including the health and wellbeing benefits
  - cover the barriers to change
  - outline practical strategies to help reduce alcohol consumption (to address the ‘menu’ component of FRAMES)
  - lead to a set of goals.
- Where there is an ongoing relationship with the patient or client, routinely monitor their progress in reducing their alcohol consumption to a low-risk level. Where required, offer an additional session of structured brief advice or, if there has been no response, offer an extended brief intervention.

## **Recommendation 11: extended brief interventions for adults**

### ***Who is the target population?***

Adults who have not responded to brief structured advice on alcohol and require an extended brief intervention or would benefit from an extended brief intervention for other reasons.

### ***Who should take action?***

NHS and other professionals in the public, private, community and voluntary sector who are in contact with adults and have received training in extended brief intervention techniques.

### ***What action should they take?***

- Offer an extended brief intervention to help people address their alcohol use. This could take the form of motivational interviewing or motivational-enhancement therapy. Sessions should last from 20 to 30 minutes. They should aim to help people to reduce the amount they drink to low risk levels, reduce risk-taking behaviour as a result of drinking alcohol or to consider abstinence.
- Follow up and assess people who have received an extended brief intervention. Where necessary, offer up to four additional sessions or referral to a specialist alcohol treatment service (see recommendation 12).

## **Recommendation 12: referral**

### ***Who is the target population?***

Those aged 16 years and over who attend NHS or other public services and may be alcohol-dependent. (For those under 16 see recommendation 6.)

### ***Who should take action?***

NHS and other professionals in the public, private, community and voluntary sector who have contact with anyone aged 16 and over.

***What action should they take?***

Consider making a referral for specialist treatment if one or more of the following has occurred. They:

- show signs of moderate or severe [alcohol-dependence](#)
- have failed to benefit from structured brief advice and an extended brief intervention and wish to receive further help for an alcohol problem
- show signs of severe alcohol-related impairment or have a related co-morbid condition (for example, liver disease or alcohol-related mental health problems).

## **2 Public health need and practice**

In Britain, the amount of pure alcohol sold per adult rose from 9.53 litres in 1986/87 to a peak of 11.78 litres in 2004/05, before dropping to 11.53 litres in 2007/08 (HM Revenue and Customs 2008). This approximates to 22 units (176 grams) per week for each person aged over 15 years.

Levels of self-reported hazardous and [harmful drinking](#) are lowest in the central and eastern regions of England (21–24% of men and 10–14% of women). They are highest in the North East, North West and Yorkshire and Humber (26–28% of men, 16–18% of women) (North West Public Health Observatory 2007).

A recent paper has also indicated that alcohol-related mortality within the UK varies according to a person's country of birth. For example, there is a higher alcohol-related mortality rate among those born in Ireland, Scotland and India compared to those born in Bangladesh, China, Hong Kong, Pakistan, the Middle East, West Africa and the West Indies (Bhala et al. 2009).

Although the amount most people drink poses a relatively low risk to their health, an estimated 24% of adults drink a hazardous or harmful amount (The NHS Information Centre 2009). (For definitions of harmful and [hazardous drinking](#) see glossary.)

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In 2007, 72% of men and 57% of women in England had an alcoholic drink on at least 1 day during the previous week (Robinson and Lader 2009). In addition, 41% of men and 35% of women exceeded the daily recommended limits on at least 1 day in the previous week (Robinson and Lader 2009).

Among those aged 15 and under, 18% had drunk alcohol in the previous week (Diment et al. 2009). Although the proportion of schoolchildren who have never had an alcoholic drink has risen (from 39% in 2003 to 48% in 2008), those who do drink are consuming more.

Between 2007 and 2008, mean alcohol consumption among young people aged 11 to 15 (specifically, those who had drunk alcohol in the previous week) increased from 12.7 units (102 g) to 14.6 units (117 g) (Diment et al. 2009). Regional analysis shows that consumption is highest among those living in the North East (17.7 units) and the North West (16.3 units). It is lowest in London (11.3 units) (The NHS Information Centre 2010).

In addition, nearly 10,000 children and young people (under the age of 18) are admitted to hospital each year as a result of their drinking (Department for Children, Schools and Families 2009).

### ***Trends in alcohol pricing and consumption***

In the past 20 years, the price of alcohol has been rising at around the same rate as for other consumer products. However, incomes have risen much faster. As a result, between 1980 and 2008 alcohol became 75% more affordable (The NHS Information Centre 2009). Since 1987, for example, beer and wine have become 139% and 124% more affordable respectively when bought from an off license (Booth et al. 2008).

Overall, 80% of alcohol is purchased by 30% of the population (Booth et al. 2008). This suggests that the current low pricing policy in supermarkets mainly benefits those drinking at hazardous and harmful levels. In some cases, alcohol products are sold below cost. It is not possible to say exactly



who pays for this subsidy, but it may be that moderate drinkers pay higher prices for other goods as a result.

### ***Health and social problems***

Alcohol consumption is associated with many chronic health problems including psychiatric, liver, neurological, gastrointestinal and cardiovascular conditions and several types of cancer. It is also linked to accidents, injuries and poisoning (Rehm et al. 2010). Drinking during pregnancy can also have an adverse effect on the developing foetus. The resulting problems can include lower birth weight and slow growth, learning and behavioural difficulties and facial abnormalities (British Medical Association Board of Science 2007).

In 2005 it has been estimated that 14,982 deaths were attributable to alcohol consumption (Jones et al. 2008).

Alcohol is also linked to a number of social problems. In 2006/07, it was associated with over 500,000 recorded crimes in England (North West Public Health Observatory 2007). It may also be a contributory factor in up to one million assaults and is associated with 125,000 instances of domestic violence (DH 2009). Up to 17 million working days are lost annually through absences caused by drinking – and up to 20 million are lost through loss of employment or reduced employment opportunities (Prime Minister's Strategy Unit 2003).

The impact on other family members can be profound, leading to feelings of anxiety, worry, depression, helplessness, anger and guilt. For example, it can lead to financial worries and concern about the user's state of physical and mental health, as well as their behaviour. It can also affect the family's social life and make it difficult for family members to communicate. (Orford et al. 2005).

**Alcohol-use disorders** (see glossary) are associated with relationship breakdown, domestic abuse, poor parenting, unsafe and regretted sex,

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truancy, delinquency, antisocial behaviour and homelessness (Prime Minister's Strategy Unit 2003).

### ***Cost of alcohol-use disorders***

Alcohol-related harm is estimated to cost society between £17.7 billion and £25.1 billion per year (DH 2008a).

It costs the NHS in England up to £2.7 billion a year to treat the chronic and acute effects of drinking (DH 2008b). It is also estimated that up to 35% of all emergency department attendances and ambulance costs are alcohol-related (Prime Minister's Strategy Unit 2003). In 2007/08 there were 863,300 alcohol-related admissions, a 69% increase since 2002/03 (The NHS Information Centre 2009).

### ***Socioeconomic factors***

The interaction between social class and alcohol is complex.

Managers and other professionals self-report that they consume the most alcohol (an average of 19.9 units (160 g) a week compared with 16.7 units (134 g) a week for people in routine and manual groups). The difference is even more marked when the figures are broken down by gender: female managers and professionals drink an average of 10.7 units (86 g) a week, compared with 7.1 units (57 g) a week for women in routine and manual groups (Goddard 2008).

However, the adverse effects of alcohol are exacerbated among those from lower socioeconomic groups, as they are more likely to experience its negative consequences. (This is not necessarily as a result of drinking themselves, but can be due to other people's drinking.) In addition, factors such as a poor diet and a general lack of money mean that people in lower socioeconomic groups who do drink heavily cannot protect themselves as well as those in more affluent groups against the negative health and social consequences.

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Compared with those living in more affluent areas, people in the most deprived fifth of the country are:

- two to three times more likely to die of causes influenced, in part, by alcohol
- three to five times more likely to die of an alcohol-specific cause
- two to five times more likely to be admitted to hospital because of an alcohol-use disorder (North West Public Health Observatory 2007).

### ***Government policy***

Since 2004, the detrimental effects of alcohol-use disorders has resulted in several government policy initiatives. In addition, the need to prevent and reduce alcohol-use disorders has been incorporated into several public service agreements (PSAs). For examples, see the list below.

- ‘Alcohol harm reduction strategy for England’ (Prime Minister’s Strategy Unit 2004).
- ‘Choosing health: making healthy choices easier’ (DH 2004).
- ‘PSA 14: increase the number of children and young people on the path to success’ (HM Treasury 2007a).
- ‘PSA 23: make communities safer’ (HM Treasury 2007b).
- ‘PSA 25: reduce the harm caused by alcohol and drugs’ (HM Treasury 2007c).
- ‘Safe. Sensible. Social. The next steps in the national alcohol strategy’ (DH 2007).
- ‘Youth alcohol action plan’ (Department for Children, Schools and Families 2008).

### **3 Considerations**

The Programme Development Group (PDG) took account of a number of factors and issues when developing the recommendations.

#### ***General***

- 3.1 The PDG agreed that the state has a duty to look after the welfare of the population as a whole (Nuffield Council on Bioethics 2007). This includes protecting it from the range of problems that may be caused by alcohol. The PDG believes interventions to prevent alcohol-related harm are likely to improve the population's overall wellbeing and productivity. It also believes they will help reduce health inequalities, as alcohol-related problems have a disproportionate effect on disadvantaged groups.
- 3.2 The PDG believes both population-wide and individual interventions are needed as part of a combined approach to reducing alcohol-related harm that will benefit society as a whole. Population-level approaches are very important because they can help reduce the aggregate level of alcohol consumed and therefore lower the whole population's risk of alcohol-related harm. They can help those not in regular contact with relevant services. They can also help reduce the number of people who start drinking harmful or hazardous amounts in the first place. In addition, they may help those who have been specifically advised to reduce their alcohol intake, by creating an environment that supports lower risk drinking.
- 3.3 The PDG acknowledges that some people drink alcohol as a result of underlying problems. Clearly, these need to be addressed along with any alcohol-related issues.

#### ***Risks and benefits***

- 3.4 The PDG recognises that a large percentage (76%) of the population drinks alcohol at a level that is unlikely to cause risk to themselves or

others. However, for others, alcohol is associated with many detrimental outcomes. In his 2008 annual report, the Chief Medical Officer highlighted that alcohol can affect not only the person drinking but those around them, including their families and the wider population.

For example, each year, drinking adversely affects up to 1.3 million children and leads to over 7000 road accident injuries and 17 million lost working days. It may also be a contributory factor in up to one million assaults and is associated with 125,000 instances of domestic violence (DH 2009). The PDG therefore believes that interventions to address alcohol-related harm should take these wider consequences into account.

- 3.5 Although there is evidence that alcohol may reduce the risk of certain cardiovascular diseases, these effects are limited to men over the age of 40 and postmenopausal women who drink small amounts. Overall, the evidence suggests that drinking alcohol is never without risk and that, as consumption increases so does the risk of developing an alcohol-related problem. An increase in per capita alcohol consumption is associated with an increase in related deaths.

### ***Population-wide interventions***

- 3.6 The PDG believes that most of the recommendations will have a greater impact on those who drink irresponsibly. However, taken together, they are very likely to improve the health of the population as a whole. As indicated by the Rose hypothesis, a small reduction in risk among a large number of people may prevent many more cases, rather than treating a small number at higher risk. A whole-population approach explicitly focuses on changing everyone's exposure to risk (Rose 2008). In this instance, the number of people who drink a heavy or excessive amount in a given population is related to how much the whole population drinks on average. Thus, reducing the

average drinking level, via population interventions, is likely to reduce the number of people with severe problems due to alcohol.

- 3.7 The PDG felt that a population-level approach to preventing alcohol-related harm could be as effective as legislation to address drink-driving had been. The latter was based on a much more limited evidence base than the proposals in these recommendations. In this case, there is extensive and consistent evidence in favour of a population-level approach on alcohol.
- 3.8 The PDG has not been able to consider all the population-wide actions needed to reduce alcohol-related harm. For example, it did not consider the provision of information on product labels and at the point-of-sale on the alcoholic content of drinks and the risks related to different levels of consumption. (This is in line with a proposed amendment to the Food Safety Act 1990 (Home Office 2009). Other issues that have not been considered include: wider dissemination of information on alcohol units and related health information (for example, within the workplace); the provision of non-alcohol related activities for young people; and the introduction of mandatory conditions for the responsible sale of alcohol.

The PDG feels that these are all important areas that need to be tackled, in conjunction with the recommendations made in this guidance.

### ***Minimum price***

- 3.9 Making alcohol less affordable is the most effective way of reducing the harm it causes among a population where hazardous drinking is common – such as in the UK (Chisholm et al. 2004). There is extensive evidence (within the published literature and from the economic analysis undertaken to support this guidance) to justify the introduction of a minimum price per unit. For example, the evidence suggests that young people who drink and people (including young

people) who drink harmful amounts tend to choose cheaper alcoholic products. Establishing a minimum price per unit would limit the ability of these groups to 'trade down' to cheaper products. The same effect would be more difficult to achieve through alcohol duties, as retailers or producers may absorb the cost of any extra duty levied.

- 3.10 Prohibiting 'below cost' selling would ensure any price increases (for example, through taxation) are passed on in full. However, a large increase in duty would be needed to raise the price of the cheapest products to a level that would reduce alcohol harm. Unlike a minimum price per unit, this would affect all products equally rather than focusing on cheaper and stronger goods.
- 3.11 A minimum price per unit (unlike a tax increase) would prevent retailers from passing on any increase to producers, or absorbing it themselves. It would also encourage producers to reduce the strength of products. As an example of the effect of minimum pricing, over a 10-year period it is estimated that a 50p minimum price per unit would reduce the cost of alcohol-related problems by £9.7 bn.
- 3.12 The PDG is aware of concerns that introducing a minimum price per unit for alcohol would have an unfair impact on people who are from disadvantaged groups. The reality is, however, that alcohol problems are not evenly distributed throughout society. Evidence shows that people from disadvantaged groups experience more health problems than others as a result of their alcohol use. They are also affected more when others around them consume excessive amounts. The PDG concluded that the overall benefits of introducing and maintaining a minimum price for alcohol would far outweigh any perceived disadvantage to lower income groups.
- 3.13 Although the introduction of a minimum price per unit of alcohol would prevent low cost promotions, it would not affect other types of alcohol promotion. The PDG, therefore, strongly supported the

government's mandatory code on retailing which included a ban on irresponsible promotions.

- 3.14 Introducing a minimum price per unit of alcohol might lead to price promotions on other products that could, in turn, offset the impact of any alcohol price increases for many consumers. The PDG also noted that alcohol price increases are factored into the 'Retail prices index' which, in turn, influences the index-linked increases in state benefits and allowances for lower income groups.

### ***Availability***

- 3.15 International evidence suggests that making it less easy to buy alcohol, by reducing the number of outlets selling it in a given area and the days and hours when it can be sold, is an effective way of reducing alcohol-related harm. Changes to the current licensing provisions will enable members of licensing authorities to be an interested party. However, the Licensing Act does not, as it stands, cover public health considerations. Making this kind of change to the current licensing provisions may result in some initial implementation difficulties. However, the PDG believes that the long-term benefits would outweigh any immediate difficulties.
- 3.16 The PDG noted the recent legislative changes in Scotland, where the protection and improvement of the public's health has been included within the licensing objectives.
- 3.17 Increasing the price of alcohol, or reducing its accessibility, may lead to an increase in the amount of alcohol imported from abroad (both legal and illegal imports). The PDG considered that the current personal alcohol import allowance could undermine the introduction of a minimum price per unit for alcohol.



## **Advertising**

- 3.18 Evidence from a systematic review of 132 studies finds a clear and consistent relationship between advertising expenditure and alcohol consumption, across the whole population. However, the median effect is very small, possibly due to the limited variation in advertising expenditure, which restricts the range of effects that are available for analysis. A greater variation might have produced larger effects. There is limited evidence relating to a complete ban on advertising. However, there is evidence that bans on tobacco have had an impact on tobacco consumption and the PDG considered that this issue merited further consideration.
- 3.19 There is strong evidence that alcohol advertising affects children and young people. The data show that exposure to alcohol advertising is associated with the onset of drinking and increased consumption among young people who already drink.
- 3.20 The PDG is aware of the role of the Advertising Standards Authority (ASA) in monitoring the self-regulation code for alcohol advertising within the UK. It noted recent positive changes to the advertising code. It also noted the findings from a recent Ofcom and ASA report which assessed the impact of these changes. The report found that young people recalled fewer advertisements and were less likely to say that they were aimed at them. However, they were also more likely to say that the adverts made alcohol look appealing and would encourage people to drink.
- 3.21 The PDG recognised that a complete ban would be needed to fully protect children and young people from alcohol advertising. However, this strategy would also affect adults, for whom there is less evidence of an adverse impact. Hence the PDG concluded that there should be a cost-benefit assessment of the impact of an advertising ban. In the meantime, it felt there was potential for the appropriate bodies to

strengthen current regulations. The Group believes that a balanced, realistic portrayal of alcohol by the media (illustrating the negative consequences of excessive alcohol consumption) would be a helpful move.

3.22 The PDG noted that product placement (a form of advertisement, where branded goods are placed within television programmes) may soon be allowed on commercial television. In view of the increase in health-related harms from alcohol in recent years, and the need to protect children from alcohol advertising, the PDG did not think it appropriate for alcohol to be included in this.

### ***Commissioning***

3.23 The PDG acknowledges the importance of 'World class commissioning', 'Vital signs operating frameworks' (VSOF) and commissioning strategic plans (CSP) when developing services. 'World class commissioning' emphasises the importance of ensuring patients' views are taken into account when making commissioning decisions.

3.24 Many people attending health and other public and voluntary sector services will benefit from the recommendations on screening and brief alcohol interventions –not just those who are seeking treatment for alcohol-related problems. The benefits of using a brief intervention are most clearly seen when it is used with people who are unaware that alcohol is compromising their mental or physical wellbeing. This approach may also help those people who may be aware that their drinking is harming either themselves or others, but are ambivalent about cutting down. NICE is producing two complementary pieces of guidance which, in conjunction with this publication, will provide advice on how to support these groups (see related NICE guidance, section 7).

- 3.25 Healthcare professionals are well placed to identify and help people with alcohol-related problems. There is strong evidence to show that many people benefit from brief advice provided by healthcare professionals who are not alcohol specialists.
- 3.26 The PDG noted the benefits of local area agreements that identify and tackle the wider determinants of health within local communities.
- 3.27 The PDG acknowledges the important role of the voluntary sector in helping to deliver the recommendations made in this NICE guidance.
- 3.28 Research on alcohol screening and brief interventions in primary healthcare and emergency departments has not been widely replicated in other health or social care settings. Nevertheless, the PDG believes evidence from other areas (such as educational settings) clearly shows that it is worthwhile for healthcare professionals outside primary care – and non-healthcare professionals – to carry out these interventions.

Many of those working in public services (such as social care, criminal justice, higher education, occupational health and children's services) have contact with people who are drinking a hazardous or harmful amount. The PDG believes these professionals are well-placed to help – and that many of their clients would benefit.

- 3.29 The PDG is aware of the importance of ensuring service delivery is coordinated (for screening, brief interventions and referrals) so that people can receive the appropriate level of care.
- 3.30 Where possible, the recommendations for practice refer to explicit and easily available intervention protocols. The aim has been to maintain standards by encouraging the use of interventions that have been evaluated and have been shown to be effective.

3.31 A number of intervention packages offer a coordinated collection of evidence-based materials for use when screening and carrying out a brief intervention. They usually consist of:

- a short guide on delivery
- a screening questionnaire
- visual material (clarifying the risks or harm caused by alcohol consumption and showing people how their drinking compares with the rest of the population)
- practical suggestions on how to reduce alcohol consumption
- a self-help leaflet
- an optional poster for display in waiting rooms.

An example is the 'Drink-less pack', which was used and evaluated in the WHO series of studies on brief interventions (Centre for Drug and Alcohol Studies 1993). Another is the 'How much is too much?' pack, which was based on the Drink-less pack but is specifically tailored for the UK (Institute of Health and Society 2006), and has been used by the DH for training.

3.32 The PDG acknowledges that public finances, especially NHS and local authority funding, may be subject to constraints. However, it concluded that the public sector savings realised in the long term by investing in alcohol misuse prevention and intervention will be significant.

### ***Working with children and young people***

3.33 The PDG noted that the Chief Medical Officer has called for an alcohol-free childhood up to the age of 15. Young people are particularly vulnerable to alcohol and the harm it causes, because they are still developing both physically and emotionally. They may also be drinking in unsupervised situations and in 'unsafe' environments (parks and street corners) where problems are more likely to occur. The PDG noted that young people may have

underlying problems which may cause them to drink alcohol and that these need to be addressed. For example, their behaviour in relation to alcohol may be indicative of underlying difficulties within the family, school or elsewhere.

- 3.34 Inevitably some children and young people will drink alcohol and the PDG felt it was necessary to provide guidance on how to help this group. While developing the recommendations, the PDG took into account other NICE guidance that addresses alcohol use among this age group (see section 7).
- 3.35 The problems young people aged under 16 may face and their susceptibility to alcohol will vary greatly. For example, a young person aged 10 is different, both physically and emotionally, to someone aged 15. In addition, young girls and boys develop at a different rate (girls often experience puberty earlier than boys). Girls who drink at an earlier age may be more likely to take risks with their sexual health, while boys may be more likely to have accidents or experience a trauma. Thus, it takes professional judgement to decide how to deal with children and young people who drink early in life.
- 3.36 The PDG noted that, in keeping with Gillick and Fraser principles (see below) it is important for professionals to encourage vulnerable young people to include their parents or guardians in any professional intervention. It is also important that professionals are aware of child safeguarding, consent and confidentiality issues. It is likely that a proportion of young people will have intellectual or other developmental difficulties that will require parental or carer involvement.
- 3.37 The Gillick principle is: "As a matter of law the parental right to determine whether or not their minor child below the age of 16 will have medical treatment terminates if and when the child achieves sufficient understanding and intelligence to understand fully what is

proposed" per Lord Scarman. In terms of determining the competence of a young person to consent to treatment, a clinician needs to apply the Fraser guidelines. These were laid down by Lord Fraser and require the professional to be satisfied that:

- the young person will understand the professional's advice
- the young person cannot be persuaded to inform their parents
- the young person is likely to begin, or to continue having, sexual intercourse with or without contraceptive treatment
- unless the young person receives contraceptive treatment, their physical or mental health, or both, are likely to suffer
- the young person's best interests require them to receive contraceptive advice or treatment with or without parental consent.

3.38 Although the Fraser guidelines specifically refer to contraception, the principles are deemed to apply to other treatments. In addition, although the judgment in the House of Lords referred specifically to medical practitioners, it is considered to apply to other health professionals, including nurses.

3.39 The Advisory Council on the Misuse of Drugs (ACMD) 'Hidden harm' report provides strong evidence of the impact of parental drug misuse on children and the steps required to address this. There has been no equivalent study of the impact of parental alcohol misuse on children (ACMD 2003).

## **Screening**

3.40 Screening is a systematic process of identifying people whose alcohol consumption places them at increased risk of physical, psychological or social problems and who would benefit from a preventive intervention. Questionnaire-based screening is accurate, minimally intrusive and has been found to be acceptable to

recipients. It is also considerably cheaper than using physiological tests to detect alcohol-related problems (Wallace 2001).

3.41 The 'Alcohol-use disorders identification test' (AUDIT) was the first screening tool designed specifically to detect hazardous and harmful drinking (Saunders et al. 1993). It has been validated in a number of health and social care settings and across a range of drinking cultures (Reinert and Allen 2007). This 10-question screening tool asks about drinking frequency and intensity and covers experience of alcohol-related problems and signs of possible dependence. AUDIT can detect 92% of genuinely hazardous and harmful drinkers and excludes 93% of those who are not. It is regarded as the 'gold standard' screening questionnaire for detecting hazardous and harmful drinking.

3.42 'Hazardous' and 'harmful' drinking are medically defined terms that have been used extensively in the scientific literature and in many recommended tools. 'Harmful use of a psychoactive substance' is an official term in the World Health Organization's (WHO) 'International classification of diseases' (10th revision). 'Hazardous use of a psychoactive substance', while not an alcohol-use disorder in itself, is included in WHO's 'Lexicon of alcohol and drug terms' (1994).

It is also useful to define drinking behaviour in terms of the types of risk associated with it. The DH has recently used the terms 'lower risk', '[increasing risk](#)' and '[higher risk](#)' drinking (see glossary for definitions). This unit-based approach complements the medically-defined terms described above. For the purposes of this guidance, 'increasing risk' equates with 'hazardous drinking' and 'higher risk' equates with 'harmful drinking'.

In addition, categories of risk in relation to alcohol consumption may be defined by scores used in the 'Alcohol use disorders identification test' (AUDIT). These are as follows: 1–7: low-risk drinking; 8–15:

hazardous drinking; 16–19: harmful drinking; 20+: possible [dependence](#). For simplicity and convenience, the terms ‘hazardous’ and ‘harmful’ are used in this guidance (Room et al. 2005).

- 3.43 Even with just 10 questions, the full AUDIT questionnaire has been considered too lengthy for use in routine practice. Thus several shorter versions have been developed (for details see [www.ncl.ac.uk/ihs/assets/pdfs/hmitm/screeningtools.pdf](http://www.ncl.ac.uk/ihs/assets/pdfs/hmitm/screeningtools.pdf)). These comprise between one and four questions. Generally, they are less accurate than the full AUDIT and do not clearly differentiate between hazardous, harmful and possibly dependent drinking.
- 3.44 Different factors may make some people more vulnerable to alcohol than others and this can affect the precision of some screening tools. These factors can include lower body weight, inexperience in handling the psychological effects of alcohol being less able to metabolise it or being more susceptible to its adverse effects.
- 3.45 Women are more vulnerable to the effects of alcohol than men and younger and older people tend to be more vulnerable than those who are middle-aged. In addition, some black and minority ethnic groups are less able to metabolise alcohol than caucasians. In such cases, lower cut-off points on screening tools may need to be applied.
- 3.46 Reducing the cut-off point on a screening tool will increase its sensitivity (that is, the ability to identify truly positive cases of hazardous or harmful drinking). However, this can be at the expense of specificity (the ability to accurately exclude those who are not drinking a hazardous or harmful amount). Thus, professional judgement may be needed before screening cut-off points can be altered. It is for this reason that the PDG has not recommended specific (lowered) cut-off points on various screening tools.



3.47 Professional judgement is needed to decide on any additional support that should be offered to vulnerable groups who are identified as being hazardous or harmful drinkers. This includes:

- women (in particular those who are, or are thinking of becoming, pregnant)
- younger people
- people aged 65 and over
- people from some black and minority ethnic groups.

3.48 The PDG recognises that a language-based screening questionnaire may not be the most appropriate tool for certain groups. This includes those whose first language is not English and people with learning disabilities or cognitive impairment. How best to establish whether people in these groups are at risk from alcohol or are experiencing alcohol-related harm will be a matter of professional judgement.

### ***Brief interventions***

3.49 There are two main types of brief intervention: structured brief advice or extended brief intervention. Nearly all of the latter are based on the principles and practice of 'motivational interviewing' (Miller and Rollnick 2002).

3.50 Evidence shows that brief advice is effective where time is tight – even when there is only 5 minutes available. The evidence is mixed on the additional benefit of providing extended brief interventions in healthcare settings. Thus brief advice is recommended as a first step for adults (aged 18 and over) who have been identified as drinking at hazardous or harmful levels. If brief advice does not lead to a reduction in hazardous or harmful drinking (or if an individual wishes further input) then an extended brief intervention, including motivational interviewing, has been recommended (see recommendations 8 and 11).

- 3.51 Most extended brief interventions that have been evaluated in research are short versions of motivational interviewing. Examples include the 'Drinker's check-up' (Miller et al. 1988), consisting of one assessment session and one feedback and counselling session. Another example is 'motivational enhancement therapy', which was developed as a four-session intervention in 'Project MATCH' in the USA (Miller et al. 1992). It was then adapted as a three-session intervention in the 'United Kingdom alcohol treatment trial' (UKATT Research Team 2005).
- 3.52 Some extended brief interventions, perhaps consisting of a single session lasting 30–40 minutes, are based on motivational interviewing principles but would not qualify as full motivational interviewing.
- 3.53 While the distinctions between motivationally-based interventions should be borne in mind, for the purposes of this guidance, all motivationally-based interventions are referred to as extended brief interventions.
- 3.54 There is limited evidence on the effectiveness of brief interventions for young people under the age of 16, with some data suggesting there could be adverse outcomes. Most of the research has been carried out among adults in healthcare settings. However, there is broadly positive evidence from educational settings (such as colleges and universities). Generally, the interventions have taken the form of motivational interviews with young people aged over 16. As a result, the PDG has recommended the use of extended brief interventions for people aged 16–17. However, it is not clear from current evidence if this type of brief intervention can be adapted for younger people.
- 3.55 In motivational interviewing, the practitioner establishes the client's readiness to change and it helps them to make their own decisions with regard to their alcohol use. Some young people may not have

the language skills to partake in a motivational interview. In addition, it may not be appropriate to emphasise to those who may need external direction and indeed, safeguarding, that they have a choice. For more mature young people (that is, those who are 'Gillick-competent'), however, the PDG judges that it is appropriate to extrapolate the evidence from educational settings to health and social care settings, especially as part of a response to meeting their identified needs. But as noted elsewhere, intervening with those below 16 years generally requires efforts to include parents or carers.

### ***Referral***

3.56 A brief intervention will address many people's alcohol-related problems. However, those who are moderately or severely alcohol-dependent are likely to need specialist help. This is also true of people who experience physical harm, such as liver damage or mental health problems, as a result of drinking alcohol. In such cases, the recommendations in this guidance should be read in conjunction with two complementary pieces of NICE guidance: 'Alcohol use disorders in adults and young people: clinical management' and 'Alcohol-use disorders: diagnosis, assessment and management in young people and adults'.

## ***Evaluation***

3.57 The PDG recognises that its recommendation to carry out formal evaluations (see recommendation 5) and routine follow-ups of alcohol interventions will change established commissioning practice. Commissioning bodies may seek partnerships with academic institutions to help design evaluation protocols. It may also be that government will provide guidance on minimum standards for comprehensive, routine evaluation and research into local alcohol treatment systems.

Although some aspects of evaluation may be cost neutral, robust evaluation and research will need specified resources. However, the PDG takes the view that evaluation will be essential in ensuring value for money in reconfigured local alcohol treatment systems.

## ***Interpreting the evidence***

3.58 The PDG recognised that empirical data alone, even from the best conducted investigation, seldom provides a sufficient basis for making recommendations. This data requires interpretation and analysis, using prior knowledge and understanding and existing models and theories. Therefore, the PDG developed its recommendations using the best available empirical data and inductive and deductive reasoning.

3.59 The PDG acknowledged that the traditional hierarchy of evidence does not resolve all the problems associated with empirical data. For example, while it explicates the degree of bias attributable to poor internal validity, it does not answer it completely. Nor does it deal with external validity, that is, the degree to which findings are transferable to other experimental settings or to practice. The PDG therefore looked at a broad range of evidence. (For further details, see chapters 3 and 7 of 'Methods for development of NICE public health

guidance [second edition, 2009]'. This is available on the NICE website.)

## 4 Implementation

NICE guidance can help:

- NHS organisations, social care and children's services meet the requirements of the DH's 'Operating framework for 2008/09' and 'Operational plans 2008/09–2010/11'.
- NHS organisations, social care and children's services meet the requirements of the Department of Communities and Local Government's 'The new performance framework for local authorities and local authority partnerships'.
- National and local organisations within the public sector meet government indicators and targets to improve health and reduce health inequalities.
- Local authorities fulfil their remit to promote the economic, social and environmental wellbeing of communities.
- Local NHS organisations, local authorities and other local public sector partners benefit from any identified cost savings, disinvestment opportunities or opportunities for re-directing resources.
- Provide a focus for multi-sector partnerships for health, such as local strategic partnerships.

NICE has developed tools to help organisations put this guidance into practice. For details, see our website at [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

## 5 Recommendations for research

The PDG recommends that the following research questions should be addressed. It notes that 'effectiveness' in this context relates not only to the

size of the effect, but also to cost effectiveness and duration of effect. It also takes into account any harmful or negative side effects.

1. How does advertising by industry and health agencies affect the drinking behaviour of the population as whole? (This includes the use of new media.)
2. What is the effect on alcohol consumption of combining different policies on price, promotion and availability?
3. Which screening tool should be considered as the 'gold standard' for assessing the drinking behaviour of those under the age of 18?
4. Are brief interventions effective and cost effective in reducing alcohol use among various subgroups of the population, such as:
  - those under 16 and over 65
  - people from some black and minority ethnic groups
  - pregnant women attending antenatal care?
5. Are screening and brief alcohol interventions effective and cost-effective in:
  - medical settings outside primary care and emergency departments (for example, in district hospitals or mental health settings)
  - non-medical settings (for example, on criminal justice or social services premises, in pharmacies or in the workplace)
  - voluntary sector organizations?
6. What factors (conditions and components) ensure a brief intervention is effective in promoting low-risk alcohol consumption?
7. To what extent are local services responding to the needs of children affected either by parental alcohol misuse or their own drinking – and which interventions are effective in helping these families?

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More detail on the gaps in the evidence identified during development of this guidance is provided in appendix D.

## 6 Updating the recommendations

This guidance will be reviewed at 3 and 5 years after publication to determine whether all or part of it should be updated. Information on the progress of any update will be posted at [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

## 7 Related NICE guidance

### *Published*

Alcohol-use disorders: diagnosis and clinical management of alcohol-related physical complications. NICE clinical guideline 100 (2010). Available from [www.nice.org.uk/guidance/CG100](http://www.nice.org.uk/guidance/CG100)

Preventing cardiovascular disease. NICE public health guidance 25 (2010). Available from [www.nice.org.uk/guidance/PH25](http://www.nice.org.uk/guidance/PH25)

Antisocial personality disorder: treatment, management and prevention. NICE clinical guideline 77 (2009). Available from [www.nice.org.uk/guidance/CG77](http://www.nice.org.uk/guidance/CG77)

Attention deficit hyperactivity disorder: diagnosis and management of ADHD in children, young people and adults. NICE clinical guideline 72 (2008). Available from [www.nice.org.uk/guidance/CG72](http://www.nice.org.uk/guidance/CG72)

Antenatal care: routine care for the healthy pregnant woman. NICE clinical guideline 62 (2008). Available from [www.nice.org.uk/guidance/CG62](http://www.nice.org.uk/guidance/CG62)

School-based interventions on alcohol. NICE public health guidance 7 (2007). Available from [www.nice.org.uk/guidance/PH7](http://www.nice.org.uk/guidance/PH7)

Behaviour change. NICE public health guidance 6 (2007). Available from [www.nice.org.uk/guidance/PH6](http://www.nice.org.uk/guidance/PH6)

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Interventions to reduce substance misuse among vulnerable young people. NICE public health guidance 4 (2007). Available from [www.nice.org.uk/guidance/PH4](http://www.nice.org.uk/guidance/PH4)

Schizophrenia: core interventions in the treatment and management of schizophrenia in primary and secondary care. NICE clinical guideline 1 (2002). Available from [www.nice.org.uk/guidance/CG1](http://www.nice.org.uk/guidance/CG1)

### ***Under development***

Pregnancy and complex social factors. NICE clinical guideline (publication expected September 2010).

Personal, social and health education focusing on sex and relationships and alcohol education. NICE public health guidance (publication expected January 2011).

Alcohol-use disorders: diagnosis, assessment and clinical management of harmful drinking and alcohol dependence. NICE clinical guideline (publication expected February 2011).

## **8 Glossary**

### **Alcohol dependence**

A cluster of behavioural, cognitive and physiological factors that typically include a strong desire to drink alcohol and difficulties in controlling its use. Someone who is alcohol-dependent may persist in drinking, despite harmful consequences. They will also give alcohol a higher priority than other activities and obligations. For further information, please refer to: 'Diagnostic and statistical manual of mental disorders' (DSM-IV) (American Psychiatric Association 2000) and 'International statistical classification of diseases and related health problems – 10th revision' (ICD-10) (World Health Organization 2007).



## **Alcohol-use disorders**

Alcohol-use disorders cover a wide range of mental health problems as recognised within the international disease classification systems (ICD-10, DSM-IV). These include hazardous and harmful drinking and alcohol dependence. See 'Harmful' and 'Hazardous' drinking and 'Alcohol dependence'.

## **Alcohol-use disorders identification test (AUDIT)**

AUDIT is an alcohol screening test designed to see if people are drinking harmful or hazardous amounts of alcohol. It can also be used to identify people who warrant further diagnostic tests for alcohol dependence ([http://whqlibdoc.who.int/hq/2001/WHO\\_MSD\\_MSB\\_01.6a.pdf](http://whqlibdoc.who.int/hq/2001/WHO_MSD_MSB_01.6a.pdf)).

## **Alcohol-related harm**

Physical or mental harm caused either entirely or partly by alcohol. If it is entirely as a result of alcohol, it is known as 'alcohol-specific'. If it is only partly caused by alcohol it is described as 'alcohol-attributable'.

## **Brief intervention**

This can comprise either a short session of structured brief advice or a longer, more motivationally-based session (that is, an extended brief intervention – see also below). Both aim to help someone reduce their alcohol consumption (sometimes even to abstain) and can be carried out by non-alcohol specialists.

## **Clinical management of people with alcohol-related disorders**

Any pharmacological or psychosocial intervention carried out by a clinician to manage the clinical problems caused by alcohol or any related medical or psychiatric complications. For example, support to help with withdrawal, managing liver damage and treating conditions such as Wernicke's encephalopathy.

## **Commissioning**

Primary care trusts (PCTs) and drug and alcohol action teams (DAATs) may commission alcohol support services from a range of 'providers'. This includes GPs, hospitals, mental health trusts and voluntary and private organisations.

## **Dependence**

See 'Alcohol dependence'.

## **Extended brief intervention**

This is motivationally-based and can take the form of motivational-enhancement therapy or motivational interviewing. The aim is to motivate people to change their behaviour by exploring with them why they behave the way they do and identifying positive reasons for making change. In this guidance, all motivationally-based interventions are referred to as 'extended brief interventions'.

## **FRAMES**

FRAMES is an acronym summarising the components of a brief intervention. Feedback (on the client's risk of having alcohol problems), responsibility (change is the client's responsibility), advice (provision of clear advice when requested), menu (what are the options for change?), empathy (an approach that is warm, reflective and understanding) and self-efficacy (optimism about the behaviour change).

## **Harmful drinking**

A pattern of alcohol consumption that is causing mental or physical damage.

## **Hazardous drinking**

A pattern of alcohol consumption that increases someone's risk of harm. Some would limit this definition to the physical or mental health consequences (as in harmful use). Others would include the social consequences. The term is currently used by WHO to describe this pattern of alcohol consumption. It is not a diagnostic term.

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### **Higher-risk drinking**

Regularly consuming over 50 alcohol units per week (adult men) or over 35 units per week (adult women).

### **Increasing-risk drinking**

Regularly consuming between 22 and 50 units per week (adult men) or between 15 and 35 units per week (adult women).

### **Looked after children**

The term 'looked after' has a specific legal meaning. It refers to children and young people who are provided with accommodation on a voluntary basis for more than 24 hours. This compares with the term 'in care' which refers to those who are compulsorily removed from home and placed in care under a court order.

### **Lower-risk drinking**

Regularly consuming 21 units per week or less (adult men) or 14 units per week or less (adult women). It is also known as 'sensible' or 'responsible' drinking.

### **Responsible authority**

Responsible authorities have to be notified of all licence variations and new applications and can make representations regarding them. The Licensing Act 2003 lists responsible authorities. They include the police, environmental health and child protection services, fire and rescue and trading standards.

### **Saturated (in relation to licensed premises)**

Describes a specific geographical area where there are already a lot of premises selling alcohol – and where the awarding of any new licences to sell alcohol may contribute to an increase in alcohol-related disorder.

### **Screening**

For the purposes of this guidance, screening involves identifying people who are not seeking treatment for alcohol problems but who may have an alcohol-

use disorder. Practitioners may use any contact with clients to carry out this type of screening. The term is not used here to refer to national screening programmes such as those recommended by the UK National Screening Committee (UK NSC).

### **Structured brief advice**

A brief intervention that takes only a few minutes to deliver.

### **Treatment**

A programme designed to reduce alcohol consumption or any related problems. It could involve a combination of counselling and medicinal solutions.

### **UK government drinking guidelines**

Guidelines set by the UK government on how much alcohol may be consumed without a serious impact on health. The guidelines recommend that men should not regularly drink more than 3–4 units of alcohol per day, and women should not regularly drink more than 2–3 units of alcohol per day. In terms of weekly limits, men are advised to drink no more than 21 units and women no more than 14 units per week. Anyone who has drunk heavily in one session is advised to go without alcohol for 48 hours, to give their liver and other body tissues time to recover. See 'Unit'.

### **Unit**

In the UK, alcoholic drinks are measured in units. Each unit corresponds to approximately 8 g or 10 ml of ethanol. The same volume of similar types of alcohol (for example, 2 pints of lager) can comprise a different number of units depending on the drink's strength (that is, its percentage concentration of alcohol).

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## **Appendix A Membership of the Programme Development Group (PDG), the NICE project team and external contractors**

### ***The Programme Development Group***

PDG membership is multidisciplinary, comprising public health practitioners, clinicians (both specialists and generalists), local authority officers, teachers, social care professionals, representatives of the public, patients, carers, academics and technical experts as follows.

**Jane Benanti** Consultant for substance misuse, Sandwell Mental Health NHS and Social Care Trust, West Bromwich

**John Dervan** Retired Chief Executive, Alcohol Treatment Agency

**Paul Edmondson-Jones** Director of Public Health and Wellbeing, Portsmouth City

**Vivienne Evans** Chief Executive, Adfam

**Jayne Gosnall** Treasurer, Salford Drug and Alcohol Forum

**Nick Heather** Emeritus Professor of Alcohol and Other Drug Studies, Northumbria University

**Sauid Ishaq** Gastroenterologist, Dudley PCT

**Eileen Kaner (Chair)** Professor of Public Health Research, Newcastle University

**Anne Ludbrook** Professor of Health Economics, University of Aberdeen

**Paul McArdle** Consultant Child and Adolescent Psychiatrist, Northumberland Tyne and Wear NHS Trust

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**Jim McCambridge** Senior Lecturer, London School of Hygiene and Tropical Medicine

**Trevor McCarthy** Independent Addictions Consultant and Trainer

**Harshad Mistri** Retired GP

**Lynn Owens** Nurse Consultant, Liverpool PCT

**Chris Record** Consultant Physician in Gastroenterology and Hepatology, Newcastle upon Tyne Hospitals NHS Trust

**Don Shenker** Chief Executive, Alcohol Concern

**Patrick Smythe** Licensing Inspector, West Midlands Police

**Ian Treasure** Alcohol Harm Reduction and Commissioning Manager and Deputy Director of Corporate Affairs and Partnerships, NHS Blackpool

### ***Co-optees***

**Peter Anderson** Consultant in Public Health

### ***NICE project team***

**Mike Kelly**

CPHE Director

**Antony Morgan**

Associate Director

**Dylan Jones**

Lead Analyst

**James Jagroo**

Analyst

**Linda Sheppard**

Analyst

**Andrew Hoy**

Analyst

**Bhash Naidoo**

Technical Adviser, Health Economics

**Sue Jelley**

Senior Editor

**Alison Lake**

Editor

***External contractors***

**Effectiveness reviews**

Review 1: 'Interventions on control of alcohol price, promotion and availability for prevention of alcohol-use disorders in adults and young people' was carried out by the University of Sheffield, School of Health and Related Research (SchARR). The principal authors were: Alan Brennan, Fiona Campbell, Jim Chilcott, Liddy Goyder, Louise Guillaume, Rachel Jackson, Maxine Johnson, Nick Latimer, Petra Meier, Josie Messina, Nick Payne, Robin Purshouse and Rachid Rafia.

Review 2: 'Screening and brief interventions for prevention and early identification of alcohol-use disorders in adults and young people' was carried out by the University of Sheffield (SchARR). The principal authors were: Alan Brennan, Fiona Campbell, Jim Chilcott, Liddy Goyder, Louise Guillaume, Rachel Jackson, Maxine Johnson, Nick Latimer, Petra Meier, Josie Messina, Nick Payne, Robin Purshouse and Rachid Rafia.

**Economic analysis**

Review 3: 'Prevention and early identification of alcohol-use disorders in adults and young people. Macro-level interventions for alcohol-use disorders: cost-effectiveness review'. This was carried out by the University of Sheffield (SchARR). The principal author was Nick Latimer.

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Review 4: 'Prevention and early identification of alcohol-use disorders in adults and young people. Screening and brief interventions: cost effectiveness review'. This was carried out by the University of Sheffield (ScHARR). The principal authors were: Louise Guillaume and Nick Latimer.

'Modelling to assess the effectiveness and cost effectiveness of public health-related strategies and interventions to reduce alcohol attributable harm in England using the Sheffield alcohol policy model version 2.0'. This was carried out by the University of Sheffield (ScHARR). The principal authors were: Alan Brennan, Rachel Jackson, Petra Meier, Yang Meng, Robin Purshouse, Rachid Rafia and Karl Taylor.

### **Fieldwork**

The fieldwork 'Alcohol-use disorders: preventing the development of hazardous or harmful drinking' was carried out by Liverpool John Moores University.

## **Appendix B Summary of the methods used to develop this guidance**

### ***Introduction***

The reviews and economic analysis include full details of the methods used to select the evidence (including search strategies), assess its quality and summarise it.

The minutes of the PDG meetings provide further detail about the Group's interpretation of the evidence and development of the recommendations.

All supporting documents are listed in appendix E and are available at [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

### ***Guidance development***

The stages involved in developing public health programme guidance are outlined in the box below.

1. Draft scope released for consultation
2. Stakeholder meeting about the draft scope
3. Stakeholder comments used to revise the scope
4. Final scope and responses to comments published on website
5. Evidence reviews and economic analysis undertaken
6. Evidence and economic analysis released for consultation
7. Comments and additional material submitted by stakeholders
8. Review of additional material submitted by stakeholders (screened against inclusion criteria used in reviews)
9. Evidence and economic analysis submitted to PDG
10. PDG produces draft recommendations
11. Draft guidance released for consultation and for field testing
12. PDG amends recommendations
13. Final guidance published on website
14. Responses to comments published on website

## ***Key questions***

The key questions were established as part of the scope. They formed the starting point for the reviews of evidence and were used by the PDG to help develop the recommendations. The primary questions were:

**Question 1:** What type of price controls are effective and cost effective in reducing alcohol consumption, alcohol misuse, alcohol-related harm or alcohol-related social problems among adults and young people?

**Question 2:** Which interventions are effective and cost effective at managing alcohol availability to reduce levels of consumption, alcohol misuse, alcohol-related harm or alcohol-related social problems among adults and young people?

**Question 3:** Is the control of alcohol promotion (for example, advertising) effective and cost effective in reducing levels of consumption, alcohol misuse, alcohol-related harm or alcohol-related social problems among adults and young people?

**Question 4:** What are the key factors that increase the risk of an individual misusing alcohol? When are individuals most vulnerable to alcohol misuse?

**Question 5:** Are alcohol screening questionnaires, biochemical markers or clinical indicators (for example, hypertension, dilated facial capillaries) an effective and cost effective way of identifying adults and young people who currently misuse – or are at risk of misusing – alcohol?

**Question 6:** Are brief interventions effective and cost effective in managing hazardous and harmful drinking among adults and young people?

**Question 7:** What are the key barriers to helping adults and young people manage their drinking behaviour (for example, is access to services a problem)? What are the key facilitators?

These questions were made more specific for each review (see reviews for further details).

### ***Reviewing the evidence of effectiveness***

Two reviews of effectiveness were conducted.

### **Identifying the evidence**

Relevant literature was identified using an iterative search process. Study types and years were not predefined. The following databases were searched.

- ASSIA (Applied Social Science Index and Abstracts)
- Cochrane Library (Cochrane database of systematic reviews, Database of abstracts of reviews of effects, Health technology assessment and Cochrane-controlled trials register)
- EconLit
- MEDLINE (including MEDLINE in process)
- NHS Economic Evaluation Database (NHS EED)
- Social Science Citation Index

Additional searches (non-systematic) were carried out on the following websites:

- Alcohol and Education Research Council ([www.aerc.org.uk](http://www.aerc.org.uk))
- Alcohol Concern ([www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk))
- Association of Public Health Observatories ([www.apho.org.uk](http://www.apho.org.uk))
- Department for Culture, Media and Sport ([www.culture.gov.uk](http://www.culture.gov.uk))
- Department of Health ([www.dh.gov.uk](http://www.dh.gov.uk))
- Home Office ([www.homeoffice.gov.uk](http://www.homeoffice.gov.uk))
- National Institute of Health and Clinical Excellence ([www.nice.org.uk](http://www.nice.org.uk))
- National Treatment Agency ([www.nta.nhs.uk](http://www.nta.nhs.uk))
- Portman Group ([www.portman-group.org.uk](http://www.portman-group.org.uk))



### **Selection criteria**

Studies were included in the effectiveness reviews if:

- people of a range of ages were involved
- interventions were relevant to the key questions set out in the reviews
- outcomes such as alcohol consumption, alcohol misuse, alcohol-related harm, social problems, costs and economic impact were reported.

Studies were excluded if:

- they were not published in English
- the study population was below the age of 10 years
- the evidence did not originate in economically developed countries (that is, if it did not come from countries that are members of the Organisation for Economic Cooperation and Development [OECD]).

### **Quality appraisal**

Included papers were assessed for methodological rigour and quality using the NICE methodology checklist, as set out in the NICE technical manual 'Methods for the development of NICE public health guidance' (see appendix E). Each study was graded (++, +, –) to reflect the risk of potential bias arising from its design and execution.

### ***Study quality***

- ++ All or most of the methodology checklist criteria have been fulfilled. Where they have not been fulfilled, the conclusions are thought very unlikely to alter.
- + Some of the methodology checklist criteria have been fulfilled. Those criteria that have not been fulfilled or not adequately described are thought unlikely to alter the conclusions.
- Few or no methodology checklist criteria have been fulfilled. The conclusions of the study are thought likely or very likely to alter.

### **Summarising the evidence and making evidence statements**

The review data was summarised in evidence tables (see full reviews).

The findings from the reviews were synthesised and used as the basis for a number of evidence statements relating to each key question. The evidence statements were prepared by the public health collaborating centre (see appendix A). The statements reflect the collaborating centre's judgement of the strength (quantity, type and quality) of evidence and its applicability to the populations and settings in the scope.

### ***Economic analysis***

The economic analysis consisted of two cost effectiveness reviews and an economic modelling report .

### **Review of economic evaluations**

The following databases were searched for economic literature, in addition to the searches carried out for the effectiveness reviews:

- EconLIT
- NHS Economic Evaluation Database (NHS EED).

Studies were included if:

- they addressed key questions 1, 2, 3, 5 and 6
- they were from peer-reviewed journals published in English
- the study population involved a range of ages (10+ years)
- they were carried out in OECD countries.

### **Economic modelling report**

A number of assumptions were made which could underestimate or overestimate the cost effectiveness of the interventions (see review modelling report for further details).

An economic model was constructed to incorporate data from the reviews of effectiveness and cost effectiveness. The results are reported in: 'Modelling to

assess the effectiveness and cost-effectiveness of public health-related strategies and interventions to reduce alcohol attributable harm in England using the Sheffield alcohol policy model version 2.0'. They are available on NICE's website at: [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

### ***Fieldwork***

Fieldwork was carried out to evaluate how relevant and useful NICE's recommendations are and how feasible it would be to put them into practice. It was conducted with commissioners, practitioners and other interested parties who are involved in alcohol services in the NHS, local authorities and the private, voluntary and community sectors. They included: policy makers, applied researchers, economists, trading standards, representatives of licensing boards, retailers and the alcohol industry, and representatives from criminal justice and social welfare.

The fieldwork comprised:

- five meetings in Birmingham, Bristol, Leicester, Liverpool and London conducted by Liverpool John Moores University with policy makers, commissioners, industry representatives and practitioners
- an online survey of professionals (14) who could not attend the fieldwork meetings.

The fieldwork meetings and online survey were commissioned to ensure there was ample geographical coverage. The main issues arising are set out in appendix C under fieldwork findings. The fieldwork report, 'Alcohol-use disorders: preventing the development of hazardous or harmful drinking', is available at [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

### ***How the PDG formulated the recommendations***

At its meeting in July 2009, the PDG considered the evidence of effectiveness and cost effectiveness to determine:

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- whether there was sufficient evidence (in terms of quantity, quality and applicability) to form a judgement
- whether, on balance, the evidence demonstrates that the intervention is effective, ineffective or equivocal
- where there is an effect, the typical size of effect.

The PDG developed draft recommendations through informal consensus, based on the following criteria:

- Strength (quality and quantity) of evidence of effectiveness and its applicability to the populations/settings referred to in the scope.
- Effect size and potential impact on the target population's health.
- Impact on inequalities in health between different groups of the population.
- Cost effectiveness (for the NHS and other public sector organisations).
- Balance of risks and benefits.
- Ease of implementation and any anticipated changes in practice.

The PDG noted that effectiveness can vary according to the context. For example, it depends on the enforcement of different regulatory regimes.

Where possible, recommendations were linked to an evidence statement(s) (see appendix C for details). Where a recommendation was inferred from the evidence, this was indicated by the reference 'IDE' (inference derived from the evidence).

The draft guidance, including the recommendations, was released for consultation in September 2009. At its meeting in December 2009, the PDG amended the guidance in light of comments from stakeholders and experts and the fieldwork. The guidance was signed off by the NICE Guidance Executive in March 2009.

## Appendix C The evidence

This appendix lists the evidence statements from four reviews (two effectiveness reviews and two cost-effectiveness reviews) and the economic modelling report provided by the public health collaborating centre (see appendix A). It links them to the relevant recommendations in section 4. (See appendix B for the key to quality assessments.)

The evidence statements are presented here without references – these can be found in the full reviews (see appendix E for details). It also sets out a brief summary of findings from the economic analysis.

The two effectiveness reviews, two cost-effectiveness reviews and economic modelling report are:

- Effectiveness reviews:
  - Review 1: ‘Interventions on control of alcohol price, promotion and availability for prevention of alcohol-use disorders in adults and young people’
  - Review 2: ‘Screening and brief interventions for prevention and early identification of alcohol-use disorders in adults and young people’.
  
- Economic analysis:
  - Review 3: ‘Prevention and early identification of alcohol-use disorders in adults and young people. Macro-level interventions for alcohol-use disorders: cost-effectiveness review’
  - Review 4: ‘Prevention and early identification of alcohol-use disorders in adults and young people. Screening and brief interventions: Cost-effectiveness review’
  - Economic modelling report: ‘Modelling to assess the effectiveness and cost effectiveness of public health-related strategies and interventions to reduce alcohol attributable

harm in England using the Sheffield alcohol policy model version 2.0'.

**Evidence statements numbered 1.1 to 3.8** are from review 1. **Evidence statements numbered 5.1 to 7.7** are from review 2. **Evidence statements numbered e1.1 to e2.3** are from review 3. **Evidence statements numbered e5.1 to e6.2** are from review 4. **Modelling statements numbered M1 to M50** are from the economic modelling report.

Where a recommendation is not directly taken from the evidence statements, but is inferred from the evidence, this is indicated by **IDE** (inference derived from the evidence).

**Recommendation 1:** evidence statements 1.1, 1.2, 1.3, 1.4, 2.27, 2.30, e1.1; modelling statements M12, M21, M22, M23, M24, M26, M27, M29, M34, M35, M36, M37

**Recommendation 2:** evidence statements 2.19, 2.20, 2.21, 2.22, 2.24, 2.25, e.2.3; modelling statements M51, M55, IDE

**Recommendation 3:** evidence statements 3.1, 3.2, 3.3, 3.4, 3.6, 3.7, 3.8

**Recommendation 4:** evidence statements 2.4, 2.5, 2.8, 2.9, 2.19, 2.20, 2.21, 2.22, 2.24, 2.25

**Recommendation 5:** evidence statements 7.1, 7.2, 7.6

**Recommendation 6:** IDE

**Recommendation 7:** evidence statements 5.7, 5.9; IDE

**Recommendation 8:** evidence statements 5.1, 5.2, 5.5, 5.6, 5.7, 5.9, 5.10, 5.11, 7.3, 7.4, 7.5, 7.7, e5.1; modelling statements M2, M3

**Recommendation 9:** evidence statements 6.1, 6.2, 6.3, 6.4, 6.10, 7.3, e6.1, e6.2; modelling statement M6; IDE

**Recommendation 10:** evidence statement 6.11; modelling statement M6

**Recommendation 11:** IDE

### ***Evidence statements***

Please note that the wording of some evidence statements has been altered slightly from those in the review team's report to make them more consistent with each other and NICE's standard house style.

#### **Evidence statement 1.1**

A comprehensive systematic review was identified that demonstrated a clear association between price/tax increases and reductions in consumer demand for alcohol (++) . These conclusions were based on two rigorous meta-analyses of price elasticities. Further evidence was supportive of a negative relationship between the price of alcohol and alcohol consumption among young people (one UK and one USA [not graded]). A positive relationship between alcohol affordability and alcohol consumption operating across the European Union was identified (one EU).

#### **Evidence statement 1.2**

A systematic review reported that there is some evidence that young people, binge drinkers and harmful drinkers tend to show a preference for cheaper drinks (++) .

#### **Evidence statement 1.3**

A limited evidence base was identified that indicated that minimum pricing may be effective in reducing alcohol consumption (one [++] and one UK [not graded]). Consulted members of the community were supportive of such measures (one [++] ).

#### **Evidence statement 1.4**

An evidence base comprising a large number of primary studies was identified that demonstrated a relationship between price/tax increases and reductions in harms (one [++] systematic review). Additional evidence indicates that

decreases in the price of alcohol contribute towards increases in alcohol-related deaths, particularly in deaths attributable to chronic causes such as alcoholic liver disease (one [++] Finland). Population groups specifically affected included the older population, the unemployed and individuals with lower levels of education, social class and income (one [++] Finland). However, the same authors observed no increase in interpersonal violence rates following the decrease in alcohol prices (one [++] Finland). A time series analysis demonstrated that increases in tax were associated with decreases in alcohol-related disease mortality (one [++] USA).

#### **Evidence statement 2.4**

Evidence was identified demonstrating that serving staff in alcohol outlets were disapproving of under-age sales (one [+] USA) and generally positive of implementing under-age checks, including electronic age-verification devices (one [++] USA).

#### **Evidence statement 2.5**

The commitment of managers and licensees towards their legal responsibilities relating to under-age sales was variable (one [+] UK and one [+] USA).

#### **Evidence statement 2.8**

The effectiveness of enforcement checks in reducing alcohol sales to under-age young people was variable (one [+] systematic review). Compliance checks conducted by local police were not effective in reducing arrests in those aged under 18 years or reducing under-age sales (one [+] and one [++] in the UK. Other studies showed favourable outcomes of compliance checks by local authorities in reducing under-age alcohol sales (two [+] USA, one [++] USA and one USA [not graded]). Checks enforced with a 30-day licence suspension or a fine were effective in reducing sales (one [+] USA). However, the deterrent effect of enforcement was found to decay over time (one [+] USA and one USA [not graded]). Additional UK-specific evidence demonstrated that enforcement of laws relating to under-age sales supported



by a local multi-agency community alcohol partnership, helped reduce possession of alcohol and antisocial behaviour and improved the relationship between enforcers and retailers.

**Evidence statement 2.9**

A study based in Fife, Scotland indicated that on- and off-licensees perceived the most effective approach to preventing under-age sales to be test purchasing carried out in conjunction with a new, nationally-accepted proof-of-age card.

**Evidence statement 2.19**

Other UK-specific studies of the effects of changes in licensing hours presented mixed findings, with some studies reporting no apparent effects on alcohol-related outcomes (two [++] UK). However, following the extension of licensing hours, one (+) UK study reported an increase in admissions for self-poisoning by overdose in which alcohol was also involved. Another UK study found increases in the occurrence of slight accidents in the workplace.

**Evidence statement 2.20**

Extensions in trading hours in Australia were typically associated with increased violence (one [++] ), motor vehicle crash rates (one [++] ) and an increase in the apprehension of impaired male drivers aged 18 to 25 years (one [++] ). Local community restrictions on alcohol availability were found to have modestly favourable outcomes, including reductions in alcohol consumption and violence. However, in one evaluation of the restriction of take-away trading hours and volumes for alcohol sales in Australia, many customers shifted their purchases to cheap cask port, providing an illustration of the ways in which consumers may respond to limitations in alcohol availability.

An increase in alcohol-related road traffic accidents followed the removal of the ban on Sunday sales of packaged alcohol in New Mexico (one USA [not graded]).

The introduction of unrestricted serving hours in Reykjavik, Iceland resulted in increased police work episodes, more emergency ward admissions for weekend nights, increased suspected drink-driving incidents, and more people circulating in the city centre at 6am (one [+]).

The Saturday opening of alcohol retail outlets in Sweden also led to an increase in sales (two ++) but no apparent change in alcohol-related harms (one [++]).

A range of evidence from Scandinavia, based on largely small-scale, local natural experiments, showed the variable impact of changes in alcohol licensing, with decreased alcohol consumption typically observed as a result of restrictions. However, a USA-based study suggested that restrictions on Sunday alcohol sales had no apparent impact on consumption, whilst earlier closing hours in bars appeared to result in increased alcohol sales.

#### **Evidence statement 2.21**

A clear positive relationship between increased outlet density and alcohol consumption among adults was demonstrated in a range of association studies (three USA [not graded], one [++] USA, two [++] Canada and one Canada [not graded]). However, one USA study (not graded) found no significant association between alcohol outlet density and heavy drinking.

#### **Evidence statement 2.22**

A positive relationship between alcohol outlet density and alcohol consumption was also observed in studies focusing on young people (one USA, one Australia, two Switzerland and two New Zealand [not graded]).

#### **Evidence statement 2.24**

A number of natural experiments demonstrated the effects of changes in alcohol outlet density on alcohol consumption and alcohol-related outcomes. Increases in alcohol outlet density tended to be associated with increases in alcohol consumption and alcohol-related morbidity and mortality in Scandinavia. A literature review found that the privatisation of alcohol retail

monopolies in the USA, Canada and Scandinavia (not graded) was linked with higher outlet densities, longer hours or more days of sale and changes in price and promotion, typically resulting in increased alcohol consumption (international). A positive association between alcohol outlet density and gonorrhoea (one USA [not graded]) was also observed following the civil unrest in Los Angeles.

**Evidence statement 2.25**

An evidence base, within one literature review, was described demonstrating positive relationships between outlet density and a range of outcomes including rates of violence, drink-driving, pedestrian injury, and child maltreatment.

**Evidence statement 2.27**

Evidence was identified that pre-drinking [drinking before going out] is a prevalent activity, both in the UK (one [++] UK and one UK [not graded]) and within one international literature review.

**Evidence statement 2.30**

Evidence was identified that demonstrated that pre-drinking is associated with heavy alcohol consumption (one [++] UK and one international [not graded]) and increased risk of alcohol-related harm (one [++] UK).

**Evidence statement 3.1**

One systematic review (++) demonstrated a small but consistent relationship between advertising and alcohol consumption at a population level.

**Evidence statement 3.2**

A systematic review of longitudinal studies found that exposure to alcohol advertising and promotion was associated with the onset of adolescent alcohol consumption and with increased consumption among adolescents who were already drinking at baseline assessment (++) . Another systematic review presented evidence of a small but consistent relationship between advertising and alcohol consumption among young people at an individual

level (++)). Another review concluded that the evidence base suggested the existence of an association between exposure to alcohol advertising and promotion and alcohol consumption among young people (++)). Further literature reviews were also indicative of alcohol advertising having an impact on young people. There was evidence of awareness, familiarity and appreciation of alcohol advertisements among this age group.

### **Evidence statement 3.3**

One systematic review presented evidence of a moderate but consistent association between point of purchase promotions and effects on alcohol consumption among under-age drinkers, binge drinkers and regular drinkers (++)).

### **Evidence statement 3.4**

A systematic review reported that outdoor and print advertising media may increase the probability of onset of adolescent alcohol consumption and also influence quantity and frequency of alcohol consumption among young people (++)). Another review included one USA-based study that reported that outdoor advertising media did not have any effect on alcohol behaviour, but was a predictor of intention to use alcohol among adolescents (++)).

### **Evidence statement 3.6**

One systematic review reported that evidence from longitudinal studies consistently demonstrated that exposure to television and other broadcast media was linked with the onset of and levels of alcohol consumption (++)). Further evidence was included in a review that indicated that exposure to alcohol portrayals via television (including advertisements aired during sports programmes) and other broadcast media may be linked with alcohol use among adolescents (++)).

### **Evidence statement 3.7**

The content of alcohol advertising was reported to be attractive to young people, conveying desirable lifestyles and images of alcohol consumption. Younger age groups and girls aged 15 to 17 years were reported to be

potentially experiencing the greatest impact of alcohol advertising (++) . A further UK-specific report showed that, despite changes to the Advertising Code, while advertising recall fell (potentially due to reduced television advertising expenditure over the study period), there was an increased perception among young people that television alcohol advertisements were appealing and would encourage people to drink. However, there was a decrease in the proportion of young people who considered alcohol commercials to be aimed at them. A literature review stated that there was no scientific evidence available to describe the effectiveness of self-regulation in alcohol advertising.

### **Evidence statement 3.8**

Inconclusive evidence was identified, within one systematic review (++) and one literature review (not graded), of the impact of advertising bans on alcohol consumption .

### **Evidence statement 5.1**

The Alcohol-use disorders identification test (AUDIT) is effective in the identification of hazardous and harmful drinking in adults in primary care (three [++] systematic reviews, one [++] Finland, one [++] UK and one literature review [not graded]). The use of lower thresholds in conjunction with alcohol screening questionnaires was recommended for women (one [++] Finland, one [++] Belgium, one [++] systematic review and one literature review [not graded]). Optimal screening thresholds for the detection of hazardous or harmful drinking using AUDIT appeared to be greater than or equal to seven or eight among men (two [++] systematic reviews) and greater than or equal to six to eight among women (one [++] systematic review, one [++] Finland and one literature review [not graded]). Optimal screening thresholds for identifying binge drinking using AUDIT were greater than or equal to seven or eight for adult males (no data available for females) (one [++] Finland). Primary studies included in a systematic review (++) recommended higher AUDIT thresholds for males (five to eight) than females (two to six).

### **Evidence statement 5.2**

The evidence for the effectiveness of shorter versions of AUDIT in adults in primary care was variable. Some authors of cross-sectional diagnostic evaluations observed comparable performance between the full AUDIT and shorter versions (two [++] Finland, one [++] Belgium and one [++] USA). Other findings drawn from primary care were more cautious of the utility of the shorter forms of this questionnaire (one [++] systematic review). The optimal screening threshold for the detection of hazardous drinking using AUDIT-C was greater than or equal to three among men and women (one [++] systematic review and one [++] USA). However, thresholds of greater than or equal to five for the detection of heavy drinking among females and greater than or equal to six for identifying bingeing moderate and heavy drinking men were also recommended (one [++] Finland). Primary studies included in a systematic review recommended higher AUDIT-C thresholds for males (three to six) than females (two to five) (one [++] ). FAST was described, within a literature review (not graded), as being effective in the detection of alcohol problems at a cut-off point of greater than or equal to one in males and females in a primary care setting in the UK.

### **Evidence statement 5.5**

Only a limited amount of evidence could be identified relating to the performance of alcohol screening questionnaires in hospital settings. The 'Five-shot questionnaire' was shown to detect alcohol misuse in adult male inpatients at a cut-off of greater than or equal to 2.5 (one [++] Belgium). AUDIT was effective in screening UK male and female adult general medical admissions for hazardous and harmful alcohol consumption (one [+] UK). AUDIT was also reported to perform effectively among general hospital inpatients (one [++] systematic review).

### **Evidence statement 5.6**

Evidence was identified for the use of alcohol screening questionnaires among adults in emergency care settings. One study found that the CAGE questionnaire was effective in screening for a lifetime diagnosis of alcohol

dependence in trauma centre patients ([++] USA). AUDIT-C was shown to effectively identify hazardous drinking among male and female adult traffic casualties in an emergency department (one [+] Spain). One literature review indicated that FAST displayed good screening properties in the identification of alcohol problems among males and females presenting to an A&E setting in the UK. The 'Paddington alcohol test' has been shown to be rapid, feasible to use, be UK-specific and to have reasonably good screening properties for the detection of alcohol misuse when implemented in response to clinical 'trigger' conditions in A&E care. These are listed as follows: fall; collapse; head injury; assault; accident; unwell; non-specific gastrointestinal conditions; psychiatric; cardiac; repeat attender (three [++] UK).

#### **Evidence statement 5.7**

AUDIT was shown to perform more effectively in the identification of alcohol abuse or dependence (when used at a cut-off of greater than or equal to 10) than CAGE, CRAFFT (car, relax, alone, forget, friends, trouble) or RAPS-QF (rapid alcohol problems screen) questionnaires among young people (median age of 19 years) (one [++] USA). AUDIT was also demonstrated to have higher sensitivity (when used at an optimal cut-off of greater than or equal to three) than CAGE, CRAFFT or POSIT (problem oriented screening instrument for teenagers) in the detection of problem use (that is, hazardous or harmful consumption not reaching the diagnostic threshold for an alcohol-related disorder, abuse and dependence) in a sample aged between 14 and 18 years (one [++] USA). The identified evidence for the effectiveness of SASSI (substance abuse subtle screening inventory) in screening for alcohol misuse was limited and inconclusive (two [++] USA and one [+] USA). AUDIT was found to perform reasonably well in elderly populations (one [++] systematic review), while AUDIT-5 was described as showing potential as an appropriate tool for use among older people (one [+] systematic review).

#### **Evidence statement 5.9**

The screening properties of questionnaires were influenced by the ethnicity of recipients and authors suggested that the use of appropriate cut-off scores

should be considered (one [++ systematic review, one [++] USA and one literature review [not graded]).

#### **Evidence statement 5.10**

Laboratory markers are of limited value in the detection of alcohol misuse when compared with alcohol screening questionnaires (two [++] UK, one [++] Belgium and one [+] Germany). However, the use of blood-alcohol concentration testing may complement the use of later questionnaire screening in the identification of alcohol misuse among patients treated in the emergency department resuscitation room (one [++] UK).

#### **Evidence statement 5.11**

A number of clinical indicators were described, within a cross-sectional study, a literature review and a case study, as being associated with excessive alcohol consumption (one [++] Spain, one literature review and one UK [not graded]). Awareness of such indicators may be useful in alerting health professionals to alcohol-related physical problems.

#### **Evidence statement 6.1**

Twenty seven systematic reviews provided a considerable body of evidence supportive of the effectiveness of brief interventions for alcohol misuse. Brief interventions were found to reduce alcohol consumption, alcohol-related mortality, morbidity, injuries, social consequences and the consequent use of healthcare resources and laboratory indicators of alcohol misuse.

#### **Evidence statement 6.2**

Six systematic reviews (all [++]) demonstrated that interventions delivered in primary care are effective in reducing alcohol-related negative outcomes. Three systematic reviews specifically focusing on the use of brief interventions in emergency care (one [+] and two [++]) found limited evidence of effectiveness. A further review (++) presented inconclusive evidence of the effectiveness of brief interventions in inpatient and outpatient settings. A systematic review of brief interventions for alcohol misuse in the workplace



presented limited and inconclusive findings for the effectiveness of interventions in this setting (++).

**Evidence statement 6.3**

Brief interventions are effective in reducing alcohol consumption in both men and women (seven [++]).

**Evidence statement 6.4**

Most of the primary evidence was drawn from populations with an age range of 12 to 70 years. Therefore, brief interventions for adults have been shown to be effective among adult populations.

**Evidence statement 6.10**

Extensive heterogeneity was evident in the characteristics of evaluated brief interventions. However, limited evidence would suggest that even very brief interventions may be effective in reducing alcohol-related negative outcomes, (one [++] systematic review) with inconclusive evidence for an additional positive impact resulting from increased dose (three [++] systematic reviews). Evidence from an additional review (++) suggests that brief interventions are effective but the impact of including motivational interviewing principles was unclear.

**Evidence statement 6.11**

Extended brief interventions were demonstrated to be effective in the reduction of alcohol consumption (evaluated interventions consisted of two to seven sessions with a duration of initial and booster sessions of 15 to 50 minutes (one [++] systematic review) or 10 to 15 minutes in one session with a number of specific booster sessions of 10 to 15 minutes duration (one [++] systematic review).

**Evidence statement 7.1**

Organisational factors such as adequate support and resources can influence the acceptability and implementation of screening and brief intervention for alcohol misuse.

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Implementation of screening and brief interventions is influenced by factors other than effectiveness. Positive support from the government, management and involvement of non-clinical members of staff are more likely to result in successful implementation.

There is also evidence from a range of studies in primary care settings that adequate practitioner training and support in alcohol misuse screening and use of brief intervention materials facilitates – or would facilitate – effective implementation rates and appropriate detection of ‘at risk’ drinkers. Evidence suggests that the extent of training and support available to practitioners is variable.

One RCT ([++]) USA) showed more successful implementation of screening and brief intervention where there was prior experience of this type of work, management stability and positive support in terms of coordination of programmes. Financial incentives and successful management of staff changes, as well as assistance from receptionists, were also important. However, barriers to success included competing priorities and lack of time. The importance of financial and other incentives for GPs along with readily available materials and training was also highlighted in one survey in New Zealand (+).

Evidence from RCTs (one [++] USA, one [+] USA and one [+] UK) suggests that the extent to which brief interventions are implemented, though not necessarily the appropriateness of implementation, is increased with use of a training and support intervention for GPs and nurses. One cross-sectional study ([++] Germany) provides evidence that GPs holding a qualification in addiction medicine are more likely to detect problem drinkers. However, a cross-national survey (++) found that training did not improve baseline role insecurity for GPs.

One cross-sectional study ([+] Finland) and one qualitative study ([++] Finland) found that practitioner training rates and ratings of their own familiarity with screening tools and knowledge of brief intervention content was low. The

importance of training to practitioners in this survey was evident, as were practitioner views that they lacked training to carry out counselling ([++] UK). The latter point was also evidenced in one cross-sectional study ([++] UK). A Delphi survey ([++] UK) provides evidence in the form of expert opinion that practitioner training should help raise awareness of risk factors and typical presentations of individuals with potential drinking problems.

Evidence from qualitative studies show that some nurses in the UK (one [++]) see training as an incentive to carrying out alcohol-related work.

A sample of GPs in Finland perceived that they lacked training in identifying the early stages of alcohol misuse; and GPs in a Danish focus group study (+) felt they lacked training in counselling skills.

In a probationary setting, forensic medical examiners in a UK qualitative study set in custody suites (-) felt they lacked the required training to carry out assessments of drinking behaviour.

### **Evidence statement 7.2**

Extending the current practitioner workload is a potential barrier to implementing screening and brief interventions on a large scale, particularly if all young people and adults are screened as routine practice. The extra time that implementation demands can be a barrier to acceptability and therefore a willingness to deliver such a programme.

Implementation of routine screening and brief intervention programmes requires team-working between physicians, nurses and non-clinical personnel, with consideration required regarding the extent of involvement and specific roles of team members.

Evidence from one systematic review ([++] Denmark) challenges the model of universal screening. The study concluded that implementation of universal screening does not benefit sufficient numbers of individuals to warrant the extra workload required. Nurses in one qualitative study ([++] UK) felt 'overloaded' with preventative work generally, with resources such as space,

staff and sufficient time in short supply. In another qualitative study ([+] Denmark), the additional workload of screening and brief interventions was found to be creating stress among practitioners in primary care. In terms of time available, a Canadian qualitative study (++) found that time was constrained in terms of assessing each patient.

A qualitative study of Finnish GPs (++) showed that they felt they lacked time to carry out a drinking assessment in the context of other consultation demands and weak evidence. One (-) study in Sweden found that nurses regarded time constraints as a barrier to engaging in alcohol prevention. There is mixed evidence from one RCT ([++] USA) for the utilisation of non-clinical staff in implementation in order to delegate work and thus to decrease the workload of clinicians. Another RCT found that receptionists did not have a particularly positive attitude to being involved in this type of work without adequate reimbursement ([++] UK), or to changing their perceived role ([++] USA).

In an emergency care setting, one cross-sectional study ([-] USA) provides weak evidence (from a survey of physicians) that, despite support for brief interventions in theory, lack of time is a barrier to implementation. A further UK-based study set in an emergency department also reported that lack of time was viewed as a limiting factor in delivering screening (++).

In a briefly reported UK qualitative study set in custody suites (-), forensic medical examiners felt they lacked the required time to carry out assessments of drinking behaviour.

### **Evidence statement 7.3**

There is evidence that implementation of screening and brief interventions would be facilitated by use of environments where alcohol can be discussed in a non-threatening way. Integrating screening and advice into general lifestyle discussions might increase the acceptability of screening and brief intervention for users. In a range of studies, providers and experts emphasise

the importance of appropriate contexts for discussion of alcohol use with users in order to increase acceptability.

Clinical consultations for non-alcohol-related medical problems can be an inappropriate time to discuss alcohol use, given that users are focused on the condition for which they are seeking advice. Instead, sessions such as new patient registrations and well-person clinics, where health promotion is often discussed, provide a less threatening opportunity to discuss drinking, as part of a general discussion on lifestyle issues such as diet, exercise and smoking.

Evidence was found from a cross-sectional study ([+] Sweden) that primary care users attending for scheduled appointments are more likely to be asked about their drinking behaviour. This suggests that practitioners deem certain contexts as more appropriate or more convenient in some way for carrying out screening and a brief intervention. A Delphi survey ([++] UK) also provides expert-view evidence that clinics and new registration sessions are an appropriate context for assessing drinking behaviour (in terms of user acceptability). This study also suggests that interventions might be more acceptable to users if they are tailor-made to the individual rather than global in design. There is further evidence from five UK qualitative studies (four [++] and one [+]) that practitioners and users regard clinics, registration sessions and routine consultations as opportunities for discussions in a less-threatening environment and context. That is, they provide an opportunity to discuss drinking in a context that is related to the purpose of the visit (such as lifestyle assessment or chronic condition monitoring).

Emergency care and probation settings are regarded as two contexts that provide a potential opportunity to carry out alcohol screening and give advice. However, there is scarce evidence available.

One survey of Scottish emergency care units (++) and one qualitative study ([-] UK) set in custody suites found that staff thought the location unsuitable for alcohol screening and intervention. However, two surveys from the US (both [+]) reported that both patients and surgeons found the emergency care

setting acceptable and appropriate. One US evaluation (+) provided evidence that emergency care staff may not feel adequately supported either by management or financially, with training and workload as two particular concerns. One UK survey (+) provided mixed views, with some nurses preferring an holistic approach, and others prioritising care of injuries over health promotion. A further UK-based (++) study found that the majority of consulted professionals judged the emergency department to be an appropriate place to perform alcohol screening but that implementation rates were low, potentially due to clinical inertia.

The importance of having resources in place to rapidly refer positively screened patients from the emergency department for a brief intervention was emphasised, because the rate of attendance for brief interventions dropped off markedly 2 days following referral (one [++] UK).

Implementation of alcohol screening and brief interventions in emergency care settings is not as consistent as in primary care. The setting differs from primary care in terms of patient population and types of presenting cases, and as such, account needs to be taken of barriers and facilitators to implementation that are specific to the emergency care context, where attendance is brief and often traumatic, patients are more likely to be injured, traumatised, or intoxicated, and staff may feel less prepared to give advice.

#### **Evidence statement 7.4**

There is evidence that service users have preferences regarding the status of the person dealing with their alcohol issues. Although experts consider alcohol and counselling specialists to be better qualified to carry out interventions, service users might feel stigmatised or rejected should their needs be referred on to such practitioners.

Evidence from one RCT ([+] USA) carried out in a general medicine setting showed that service users are no more likely to attend for counselling with an alcohol specialist than with a physician or nurse. In addition, qualitative evidence from the UK (one [++]) focusing on user views shows that

counselling with alcohol specialists can sometimes be perceived as stigmatising. These views contrast with expert views (one [++] UK) that alcohol workers and counsellors might be best placed to deliver a brief intervention. There are mixed views from three UK studies (all [++]) in that professionals and some users perceive the nurse as having more time for discussing drinking with users, whereas other users report that they are more likely to discuss alcohol-related issues with their GP.

### **Evidence statement 7.5**

There is some evidence that service users are generally positive about screening and intervention. There is also evidence for general under-activity in discussing drinking with service users.

Negative service user behaviour, such as aggression at being asked about their drinking, while rare, may serve as deterrents to practitioners approaching the topic of drinking with users. Actual drunkenness at consultations limits the likelihood that users will appreciate or remember the advice given.

Practitioners may benefit from training in dealing with such situations, and in approaching the topic with individuals that they perceive as 'low risk' in appropriate contexts.

Two studies (one [+] USA and one [++] UK) provide evidence that the majority of service users are positive about screening, and another ([+] Finland) that they are positive about discussing drinking. However, two qualitative studies (one [++] UK and one [+] Denmark) found that some professionals had encountered negative reactions from users in terms of embarrassment and unease, and that this led some to change their GP practice.

Evidence from two UK cross-sectional studies (both ++) shows under-activity in terms of practitioner management of hazardous drinking, with a majority of GPs in the first study only intervening in between one and six cases of hazardous drinking per year. Even in cases of heavy drinking, service users are not being asked about their consumption ([+] Finland). Another cross-sectional study ([+] Sweden) found that advice on drinking behaviour is

provided less often than for other lifestyle behaviours, such as exercise, diet, and smoking, and less often than service users expect. One cross-sectional study ([++] Finland) found that the time being spent on asking users about their drinking was typically less than 4 minutes, and another recent cross-sectional study ([+] Germany) found that detection rates of problem drinkers are low, at one in three. Possible reasons are found in a Finnish qualitative study (++) of GPs, who reported their reluctance to ask users about their drinking unless they saw clear signs of risky drinking behaviour.

### **Evidence statement 7.6**

Evidence was found that provider attitudes, knowledge, skills and behaviour can influence the implementation of screening and brief interventions for alcohol misuse.

There is evidence from primary care practitioner views of a shortfall in perceived knowledge in terms of detecting 'at-risk' individuals. There is also evidence of confusion regarding current guidelines around drinking behaviour, and the known benefits of drinking in moderation. This can affect practitioner confidence in, and motivation towards, implementing screening and brief intervention programmes effectively. In addition, the practitioner's own drinking behaviour and the user-practitioner relationship may affect the way that alcohol-related interventions are implemented.

One UK qualitative study (++) provides evidence that GPs found difficulty in identifying early-stage heavy drinkers. The study also reports difficulty working with multiple definitions of problematic drinking. One qualitative study ([+] Finland) found that GPs and nurses saw the lack of clear guidance as a barrier to carrying out brief interventions. Utilising the skills of receptionists can be useful, but there is evidence from one RCT ([++] UK) that receptionist attitudes toward the work may be less positive than that of clinicians, and that this might have an impact upon implementation.



There is weak evidence ([-] UK) that forensic medical examiners perceive that they lack the knowledge to carry out an assessment in custody suites in the UK.

Two UK qualitative studies (one [++] and one [+]) found that nurses saw alcohol as a difficult and emotive topic to broach with users. In addition, nurses reported confusion for themselves and service users around the issue of standard drink units, and the potential benefits of alcohol that create ambiguity in discussing drinking from a health promotion perspective. Other studies (one [+] UK and one [+] Finland) found that GPs relationship with alcohol could affect their behaviour in terms of addressing service user drinking, with feelings of guilt and hypocrisy potential barriers to open discussion, or facilitators to empathy. There is qualitative evidence from three studies focusing on user views (two [++] UK and one [+] USA) that discussing drinking is facilitated by a good relationship with the health professional. In addition, there is evidence (one [+] Denmark) that practitioners are concerned not to offend users by discussing alcohol for fear of disturbing the therapeutic relationship.

### **Evidence statement 7.7**

Evidence was identified that shows disparities in the way screening and brief interventions for alcohol misuse are implemented in relation to certain groups within the population. While certain groups, such as males and high earners, are more 'at-risk' than others from alcohol misuse, individuals from groups that are 'low-risk' – such as females, younger and older people – may be missed. Conversely, over-targeting can also occur due to misconceptions of the populations most at-risk of alcohol misuse.

One systematic review (+) provides inconclusive evidence that socioeconomic status affects the uptake of brief interventions. However, one cross-sectional study ([++] UK) found that unemployed individuals were more likely to receive a brief intervention than those in employment. In terms of ethnicity, there is evidence from one cross-sectional study ([+] USA) that minority ethnic groups,

in this instance black and Hispanic, and particularly Hispanic people, were more likely to be approached by practitioners regarding their alcohol consumption.

Four cross-sectional studies (one [++] UK, one [+] Sweden, one [++] Germany and one [+] Finland) provide evidence that primary care users most likely to be given advice on drinking are males. Another cross-sectional study ([+] Finland) suggests that males, as well as heavy drinkers, are also more likely to adhere to the advice provided in a brief intervention. One qualitative study ([+] Denmark) found that GPs were reluctant to address drinking with young people as they felt that they would be likely to grow out of the habit of hazardous drinking.

#### **Evidence statement e1.1**

There is limited evidence of the cost effectiveness of price controls in a UK setting. One systematic review (+) suggests that the available evidence is limited to two studies, one which takes an international perspective, and one set in Estonia. The review reports that the evidence is suggestive that in areas with a high prevalence (greater than 5%) of hazardous drinkers, as is the case in the UK, taxation will be more cost effective than other alcohol misuse macro interventions, but that the evidence base for this is not strong.

#### **Evidence statement e2.3**

There is limited evidence of the cost effectiveness of opening hours interventions in a UK setting. One study of moderate quality that takes an international perspective (+) provides evidence that reducing licensing hours provides relatively small quality of life benefits compared to other alcohol misuse interventions.

#### **Evidence statement e5.1**

One study shows that the AUDIT test is a more cost effective screening tool than measures of  $\gamma$ -glutamyltransferase, aspartate aminotransferase, per cent carbohydrate deficient transferrin, and erythrocyte mean cell volume. This is because AUDIT is both cheaper and more effective than these other tests ([+]

UK). The evidence does not allow a ranking of the cost effectiveness of these other screening methods.

#### **Evidence statement e6.1**

Cost effectiveness evidence for screening and brief interventions in the emergency care setting is scarce. The available evidence does not allow firm conclusions regarding the long-term cost effectiveness of these interventions in a UK setting. However, the evidence does suggest that brief interventions in the emergency care setting may be cost effective in the UK. One study suggests that screening plus a brief intervention may produce long-term cost savings ([+] USA), but the applicability of this evidence to the UK is uncertain. One UK study suggests that a brief intervention administered by alcohol health workers in a hospital setting will reduce consumption in the short term without significantly increasing costs, but long-term evidence is lacking (++).

#### **Evidence statement e6.2**

Cost effectiveness evidence for screening and brief interventions in the hospital setting is scarce. The available evidence does not allow conclusions regarding the cost effectiveness of these interventions in a UK setting to be made. A UK study presents evidence for screening by doctors and nurses in a general hospital setting (+), but this does not allow a conclusion to be reached regarding the most cost-effective screening method. One study suggests that screening plus a brief intervention may produce long-term cost savings ([-] Australia), but the reliability of this evidence is low due to the uncertainty in resource use estimates.

#### **Modelling statement M2**

A policy of screening and brief intervention at next GP registration is a more phased approach over time than screening at next GP consultation. The former approach would screen an estimated 39% of the population, with 36% of hazardous and harmful drinkers receiving a brief intervention over the modelled 10-year screening programme. A policy of screening and brief intervention at next GP consultation is a very large-scale implementation, with

an estimated 96% of the population screened after 10 years (of whom the majority would be screened in the first year of implementation), and 79% of hazardous and harmful drinkers receiving a brief intervention.

### **Modelling statement M3**

Screening and brief intervention in an A&E setting is estimated to screen 78% of the population within 10 years, but because the estimated uptake of brief interventions is just 30%, only 18% of hazardous and harmful drinkers are estimated to receive the brief intervention.

### **Modelling statement M6**

Sensitivity analysis shows that even fairly long brief interventions (for example, 25 minutes) would appear cost effective versus a 'do nothing' policy. There is currently no conclusive evidence of the differential effectiveness of delivery by different types of staff. On this basis, decision makers might consider the less costly staffing options that were modelled for screening and the brief intervention to be attractive. Evidence around the differential effectiveness of interventions of different duration is also inconclusive. Sensitivity analyses show that shorter duration interventions remain cost effective when using the best available evidence on the relationship between duration and effectiveness.

### **Modelling statement M12**

Increasing levels of minimum pricing show very steep increases in effectiveness. Overall changes in consumption for 20p, 25p, 30p, 35p, 40p, 45p, 50p, 60p, 70p are: -0.0%, -0.1%, -0.4%, -1.1%, -2.4%, -4.3%, -6.7%, -11.9% and -17.7%. Higher minimum prices reduce switching effects. Note that estimates for lower minimum prices are subject to less modelling uncertainty than those for higher minimum prices. This is because the consideration of supply-side responses and, in particular, a possible restructuring of the market following large mandated price increases in sections of the market, was outside the scope of the model. As an example, a minimum price of 40p per unit has the following estimated effects:

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% change in consumption	Deaths p.a. (full effect )	Hospital admissions p.a.	Crimes pa	Work absences (days p.a.)	Un-employment (persons p.a.)
-2.4%	-1,190	-39,000	-10,000	-134,000	-11,500

### Modelling statement M21

As prices increase, alcohol-attributable hospital admissions and deaths are estimated to reduce. Prevented deaths occur disproportionately in harmful drinkers. On balance, the health-harm reductions mostly relate to chronic diseases rather than acute conditions such as injuries. This is because much of the alcohol-attributable health harm occurs in middle or older age groups at significant risk of developing and potentially dying from chronic disease.

### Modelling statement M22

For chronic diseases, the time for a change in consumption to achieve the full effect in changing the prevalence of disease is important in the modelling. The reductions in health-harms, for chronic disease, observed 1-year following implementation are estimated to be around one tenth of the level that will accrue when the full effect of consumption changes occurs.

### Modelling statement M23

Crime harms are estimated to reduce as prices are increased. The crime reductions observed for policies take place across the spectrum of violent crime, criminal damage and theft, robbery and other crimes. A minimum price of 40p is estimated to reduce total crimes by 9000 per annum.

### Modelling statement M24

The evidence base for under-age purchasing is limited (because the youngest ages for which purchasing data exists in the 'Expenditure and food survey' are 16 and 17, and there are concerns on reliability even for this). Given this caveat, crime harms are estimated to reduce particularly for young people aged 11 to 18 years because they are disproportionately involved in alcohol-

related crime and are affected significantly by targeting price rises at low-priced products.

### **Modelling statement M26**

Unemployment harm estimates [that is, estimated unemployment due to alcohol consumption], reduce proportionately more than health or crime harms. Generally, all policy options that target harmful and hazardous drinkers are effective in reducing alcohol-related harm in the workplace. The size of the effect is dependent on the extent of price increases.

### **Modelling statement M27**

Unemployment due to alcohol problems among harmful drinkers is estimated to reduce as prices increase: for example, a 40p minimum price is estimated to result in 11,500 avoided unemployment cases, while a 50p minimum price is estimated to result in 25,900 avoided unemployment cases. Absence reductions are particularly focused on hazardous and harmful drinkers: for example, for 40p, the 134,000 estimated reduction in days absence is made up of 38,000 days for hazardous and 78,000 days for harmful drinkers.

### **Modelling statement M29**

The societal value of harm reduction for many of the potential policies can be substantial. When accumulated over the 10 year time horizon of the model, many policies have estimated reductions in harm valued over £500m. For example, a 40p minimum price is valued at £4bn over the 10-year period. The financial value of harm reductions becomes larger as prices are increased.

### **Modelling statement M34**

Moderate drinkers are affected in only very small ways by the policy options examined, both in terms of their consumption of alcohol and their spending.

### **Modelling statement M35**

In terms of the differential effectiveness for priority groups, harmful drinkers are expected to reduce their absolute consumption the most, but in the more effective policy options, they also spend significantly more on their purchases.

### **Modelling statement M36**

Policies which target low-priced alcohol affect harmful drinkers disproportionately. This is because moderate drinkers tend to drink a smaller proportion of the very low priced products available.

### **Modelling statement M37**

There are significant effects on harmful drinkers, but important health gains also occur in hazardous and moderate drinkers. Even though moderate drinkers are at a lower risk of health-related harms, small changes in the consumption of the large number of moderate drinkers feed through in the model to small changes in risk and appreciable changes in population health.

### **Modelling statement M51**

Though smaller than price effects, outlet density reductions have been proven to reduce both consumption and harm. As an example, the 10% reduction in outlet density has the following estimated effects:

<b>% change in consumption</b>	<b>Deaths per annum (full effect)</b>	<b>Hospital admissions per annum</b>	<b>Crimes per annum</b>	<b>Work absences (days per annum)</b>	<b>Un-employment (persons per annum)</b>
- 2.3%	-710	-25,000	-61,000	-284,000	-8100

### **Modelling statement M55**

Modelling a 10% change in licensing hours produces changes in alcohol consumption based on three studies of -1.2% (Canadian), +0.2% (US), and -3.5% (Swedish). As an example, the 10% reduction in licensing hours has the following estimated effects:

<b>% change in consumption</b>	<b>Deaths per annum (full effect)</b>	<b>Hospital admissions per annum</b>	<b>Crimes per annum</b>	<b>Work absences (days per annum)</b>	<b>Un-employment (persons per annum)</b>
- 1.2%	-420	-14,000	-27,000	-138,000	-3400

### ***Economic analysis***

The cost-effectiveness reviews and economic modelling showed that increasing the price of alcohol is likely to be a cost effective way of reducing consumption and alcohol-related harm. This could involve a general price increase, imposing a minimum price per unit or placing restrictions on discounting.

There was limited evidence on the effectiveness of reducing the availability of alcohol and restricting or banning advertising. Exploratory analyses suggested that policies to address these issues would probably have a smaller positive effect than that expected by a price increase.

The cost effectiveness reviews and economic modelling suggested that screening plus a brief intervention at the next GP consultation, the next registration with a new GP, or the next A&E visit would be cost effective when compared against 'doing nothing'.

### ***Fieldwork findings***

Fieldwork aimed to test the relevance, usefulness and feasibility of putting the recommendations into practice. The PDG considered the findings when developing the final recommendations. For details, go to the fieldwork section in appendix B and 'Alcohol-use disorders: preventing the development of hazardous or harmful drinking'.

Fieldwork participants who work within the alcohol field were positive about the recommendations and their potential to help prevent alcohol-use disorders. However, they felt that a number of areas should be given further consideration as follows.



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- A treatment pathway should be provided which not only illustrates the stages of care that the recommendations cover, but also outlines the roles and responsibilities of different professional groups.
- Good communication is needed between NICE and organisations in non-healthcare settings to ensure alcohol is tackled as part of partnership working.
- NICE should work closely with the National Treatment Agency (NTA) to ensure commissioners' concerns about the relative lack of investment in alcohol services (compared with drug services) is considered.
- The term 'motivational counselling' should be reconsidered or clearly differentiated from other motivational approaches.
- The presentation of the guidance will contribute to its impact and likely adoption. A standard approach should be used whereby each recommendation is preceded by a short statement of the evidence and a discussion of the likely outcomes of implementing the proposed actions.
- The contribution that community and voluntary groups make to reducing alcohol-related harm should be acknowledged and organisations working in these sectors should be mentioned throughout the guidance.

## Appendix D Gaps in the evidence

The PDG identified a number of gaps in the evidence related to the programmes under examination, based on an assessment of the evidence. These gaps are set out below.

1. There is only limited evidence on how alcohol advertising affects consumption among the adult population.
2. There is only limited evidence on the effectiveness of brief alcohol-related interventions aimed at those under the age of 18 and those from black and minority ethnic groups within the UK.
3. Little is known about how brief interventions work and which elements are particularly effective. For example, there is only limited evidence on the settings and populations where brief advice or motivational interviewing will be more effective or cost effective.
4. There is variable evidence on the effectiveness of using brief interventions outside primary care and emergency departments.
5. There is little UK-based evidence on the cost effectiveness of different types of brief intervention.
6. There is a lack of good quality evaluations of UK community-based programmes to prevent alcohol problems.

**Source:** Review 1, review 2 and review 4 (see appendix E for details).

The Group made seven recommendations for research. These are listed in section 5.

## Appendix E: supporting documents

Supporting documents are available at [www.nice.org.uk/guidance/PH24](http://www.nice.org.uk/guidance/PH24)

These include the following.

- Effectiveness reviews:
  - Review 1: ‘Interventions on control of alcohol price, promotion and availability for prevention of alcohol-use disorders in adults and young people’
  - Review 2: ‘Screening and brief interventions for prevention and early identification of alcohol-use disorders in adults and young people’.
  
- Economic analysis:
  - Review 3: ‘Prevention and early identification of alcohol-use disorders in adults and young people. Macro-level interventions for alcohol use-disorders: cost-effectiveness review’
  - Review 4: ‘Prevention and early identification of alcohol-use disorders in adults and young people. Screening and brief interventions: cost-effectiveness review’
  - Economic modelling report: ‘Modelling to assess the effectiveness and cost effectiveness of public health-related strategies and interventions to reduce alcohol attributable harm in England using the Sheffield alcohol policy model version 2.0’.
  
- Fieldwork report: Alcohol-use disorders: preventing the development of hazardous or harmful drinking’.
  
- A quick reference guide for professionals whose remit includes public health and for interested members of the public. This is also available from NICE publications (0845 003 7783 or email [publications@nice.org.uk](mailto:publications@nice.org.uk) – quote reference number N2117).

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For information on how NICE public health guidance is developed see:

- 'Methods for development of NICE public health guidance (second edition, 2009)' available from [www.nice.org.uk/phmethods](http://www.nice.org.uk/phmethods)
- 'The NICE public health guidance development process: An overview for stakeholders including public health practitioners, policy makers and the public (second edition, 2009)' available from [www.nice.org.uk/phprocess](http://www.nice.org.uk/phprocess)